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November/December 2019

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S&S SLIP ON EXHAUST ADDITIONAL COST







Custom motorcycle builder Jason Friend was invited to build a bike for the Born Free 11 show, and this sweet Triumph was the result. Page 12.



JONNY BOURGULT

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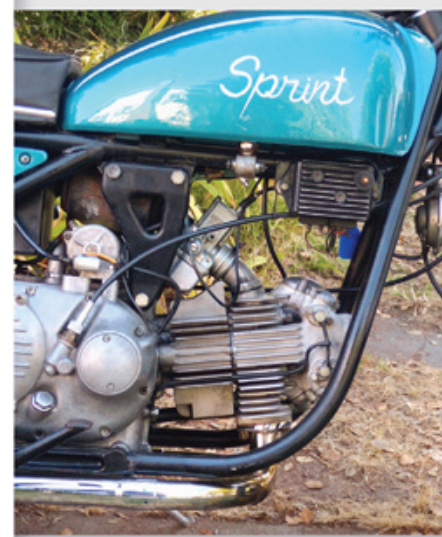
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## ON THE WEB!

### The Aermacchi runs!

Longtime MC contributor Margie Siegal picked up a cool 1973 Aermacchi Harley-Davidson 350 Sprint last fall and began a restoration project of her own. The sweet little bike is now complete. It starts and runs and it even competed in an AMCA show! Read all about the adventure at [MotorcycleClassics.com/Aermacchi-Project-Part-8](http://MotorcycleClassics.com/Aermacchi-Project-Part-8)





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# The ride of the summer

As we look towards the colder months with fall here already, the memories of summer rides come floating back. A busy travel schedule and too many deadlines kept me off a bike more than I would have liked this summer, but I did have one solid stretch of time on two wheels: our 4th Annual Ride 'Em, Don't Hide 'Em Getaway weekend in August (see Page 40 for more on the event).

Thursday morning ad man Shane Powers and I met up with our friends and supporters Tom McKee and Adam Rexroad, piled into the rented SUV and ran the route they'd plotted for us. We run it first in a car so that we can easily work on finishing out our route sheets as we go. Friday morning we got on bikes and ran the route again, a terrific 125-mile loop with a perfect mix of small and medium sized roads full of elevation changes and every kind of curve you can imagine. It was a blast. Then on Saturday we led attendees; it was even more fun to share the day with all the readers who were able to join us this year.

Royal Enfield lent us an INT650 and a Continental GT650 to ride, and I spent Friday, Saturday and part of Sunday on those (check out *Test Ride* on Page 82). Though I enjoyed the Enfields and just

the chance to be on a bike, riding in the country for three days in a row, my ride of the summer was still yet to come.

The highlight of the trip was riding the 1967 Moto Guzzi V7 you see me grinning like an idiot next to below. Owned and restored by friend of the magazine Paul Harrison, it's a bike I've drooled over since Paul finished it in 2017.

Bought on eBay as little more than a frame, an engine and a gearbox, Paul lovingly restored the bike. It's perfect in its own way, mechanically rebuilt from the ground up, yet certain pieces show the patina of age with pride, like the amazing gas tank, which still wears its original paint.

Over lunch on Sunday, Paul offered to let me ride the bike back to the resort, and I'll admit I was a little nervous. Paul's bike is very dear to him, and I knew our group pace on the way back was going to be *way* faster than I wanted to go on a bike I wasn't familiar with. I was right. Paul and I rode back at the rear of the pack, and when we'd returned, I asked Paul how much of the brakes he used during one surprise quick left turn in the route, as we were moving along a pretty solid clip. He replied, "all of them."

To start the V7, you turn the key in the dash below the speedometer to the right until the engine fires, just like you do on the dash of my brother Phill's 1962 Buick LeSabre. The bike lit immediately, settling into a loping idle.

Paul hopped on another bike and we took off down one of my favorite roads in the area, County Line Road, which runs to the nearby town of Champion. The V7's V-twin bark is distinctly Italian, and the engine pulled strong from low revs with plenty of torque, and cruises down the road with ease. What a ride. I'm smiling just thinking about it. Thanks again, Paul!

If you rode something cool this year, send me an email at [lhall@motorcycleclassics.com](mailto:lhall@motorcycleclassics.com), and send a photo too. And next time a buddy offers to let you ride his bike, do it! Don't be nervous, just be careful.

Cheers,

*Landon*



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MOTORCYCLE CLASSICS (ISSN 1556-0880)

November/December 2019, Volume 15 Issue 2  
is published bimonthly by Ogden Publications, Inc.,  
1503 SW 42nd St., Topeka, KS 66609-1265.

Periodicals Postage Paid at Topeka, KS and additional  
mailing offices. POSTMASTER: Send address changes to  
Ogden Publications, Inc., 1503 SW 42nd St.,  
Topeka, KS 66609-1265.

For subscription inquiries call: (800) 880-7567

Outside the U.S. and Canada:

Phone (785) 274-4360 • Fax (785) 274-4305

Subscribers: If the Post Office alerts us that your  
magazine is undeliverable, we have no further obligation  
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## “You can’t buy the miles off of them.”



Reader Randall Wagner aboard his new Indian Warrior some 70 years ago (left), and now on a new Royal Enfield (right).

### Then and now

The first photo is me, a 15-year-old kid on a shining new Indian Warrior, my first real motorcycle. The second is me, an 85-year-old geezer on a shining new Royal Enfield INT650. During the intervening 70 years I have owned or ridden just about everything from a Hodaka Ace 90 to a Kawasaki Concours 14 across countries and continents for a million or so miles. The Royal Enfield brings me back to where I started,

back to what first got me hooked on motorcycling. A lot has changed during seven decades, but, thankfully, a lot hasn't.

*Randall A. Wagner/Cheyenne, Wyoming*

*Randall,*

*Thank you for sharing your photos with our readers. That picture of you on your old Warrior is a treat. I'm glad to hear you are still riding, and that you've found yourself a nice bike in your new Royal Enfield. — Ed.*

### Two Nortons

I bought my first bike, a Honda CL160, at age 15 and a half. This was 49 years ago. I have owned many bikes including two Ducati 750 Sports, a Laverda 750 SF, a Moto Morini 350 and many Japanese bikes, but never a British twin. I had mentioned to my friend Scott Dunlavey that maybe I was looking for one. Scott and I go back 48 years. He is a racing champion (Baja, Pikes Peak and AMA Dirt Track) and

### The bike I wish I'd never sold

When my friends were aging out of riding bicycles and into driving their father's cars, I just had to have a motorcycle. Puberty had set in, and I knew that a rumbling, vibrating bike was the way to impress a girl. Plus to go for a ride, they had to hug you; a surefire way to break the ice!

I'd been hankering for a motorcycle well before I was legally able to ride. That point was driven home when a friend loaned me his NSU Quickly scooter. I thought that I could cajole my dad into letting me buy it, and keep it until I turned 16. Instead, he caught me riding it around our block, and was I surprised when the police arrived to get me off of it. I never found out what happened with my then ex-friend. Sorry, Murray! I had to wait until I was on my own in 1976 when I bought my dream bike: a 1973 red Honda CB175. I had to park it outside my apartment in the rain and the snow. At least when I drove to work at a camera/stereo store, I could park it inside the back storeroom. The

owner dropped by one day, and he thought that a tank full of gasoline and cardboard boxes full of Sony Trinitron TVs didn't mix. So he told me I had to park it outside. That's me in the stockroom, looking incredibly cool.

When I moved 1,400 miles to be near my dad, who was by then ill, I brought along my new wife (thanks to those hugs while riding on the Honda!). But alas, I sold my bike. Every subsequent spring, I got the fever for a motorcycle, but family and other obligations always intervened. A few years ago, I gave in to temptation, and now have two bikes, both red. But neither has the chrome fenders and the kickstart that I love so much. One day I hope to find that bike, and travel in its time machine back to when I was 30 pounds lighter, 43 years younger, and feeling as cool as I thought I looked back then.

*Vince Wesley/Vancouver, Canada*

*Vince,*

*Thanks for writing. Keep looking for that CB175! — Ed.*



Vince and his CB175 way back in 1976.



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Scott Somers' second Norton, a super-original John Player Special (left), and his first, an 850 Roadster converted to an S model.

an amazingly talented mechanic. Soon after, he calls. "You need to come look at this Norton!" OK when and where? A short test ride and I am an owner of a 1974 Yellow 850 Roadster which has been converted to an S (high pipe) model. I love high pipes.

Fast forward four years. Phone rings, "Hey it is Scott. Check your email, I

sent pictures of a bike you need! It's a two-owner John Player Norton with under 4,900 original miles and every document including the original sales receipt." How much I ask? "It doesn't matter. You can't buy the miles off of them." A meeting is arranged. A short 370-mile drive and I am looking at the JPN. When did I know that I had to have

it? The minute I looked at the photos and Scott called with the details. So two Nortons now. I am a subscriber and read your magazine cover to cover. Thanks for all of the great info and fine photos. Scott is a Triumph guy so it always amazes me that he keeps finding me Nortons.

Scott Somers/Walnut Creek, California

## Finding a Yamaha

I enjoyed the column on the bike you wish you never sold. I had one of those too. In 1975 I bought a new Yamaha XS500. It was my first brand-new bike. I rode the bike everywhere for about 5 years before I sold it, and regretted it almost immediately. As with many of us, life happened and family and home took priority. A few years ago I started checking online to see if I could find another one. I knew the bike had never been that popular, so I wasn't that optimistic about finding one, but it didn't cost anything to look. Then last December I found two of them, one in Oregon and one in Pennsylvania. I wound up buying the Pennsylvania bike and had it shipped to me in Arizona. I've

included pictures of both my bikes. The first photo is the bike I bought in 1975. The other is the one I have now. I was even able to find the official Yamaha accessory luggage rack and backrest like I had on my original bike and add it to the "new" one. I've gone through my new bike and it runs and rides just like my old one. Not only do I enjoy riding it, I've had a blast working on it. Thank you for a great magazine and keep up the great work.

Paul Dorton/Mesa, Arizona

Paul,

What a find, luggage rack and all. Congrats, and thanks for sharing your story! — Ed.



Reader Paul Dorton's new Yamaha XS500 back in 1975 (left), and his recent find, another 1975 XS500, bought in Pennsylvania.





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## Domestic or Imported? 1961-1968 Aermacchi Harley-Davidson 250 Wisconsin/Sprint/SS

If longevity, versatility and development potential count for anything, Alfredo Bianchi's 1956 design for a stylish 175cc commuter bike should be considered one of the best. Though the Aermacchi Chimera was a flop, Bianchi's simple OHV powerplant doubled its displacement over two decades, took Renzo Pasolini to second place in the 1972 250cc world championship, and launched the flat-track careers of Cal Rayborn and Gene Romero. Sixty years on, it's still a weapon of choice in AHRMA Sound of Singles racing.

Harley-Davidson may have seen this potential when they bought 50 percent of Aermacchi in 1960. With sales of its big twins faltering, the Motor Company decided that Aermacchi's touring 250cc, the Ala Bianco (white wing) would sell well in the U.S., and certainly beat out their existing small-bike offering — the obsolete 165cc 2-stroke Super 10. So the Ala Bianco was imported into the U.S. with minor changes as the 1961 Harley-Davidson 250 Wisconsin.

Bianchi's engine followed general Italian practice in having a built-up crankshaft with ball main bearings and a roller big end. The oil-bearing crankcases split vertically. A chain turned the camshaft which operated the overhead valves by pushrods and rockers. A 24mm Dell'Orto carburetor provided fuel, which was sparked by a 6-volt battery/coil ignition system. Bevel gears transferred output to the wet clutch and 4-speed gearbox. The engine hung from a stout spine tube frame with a telescopic front fork and dual rear spring/damper units. Brakes fitted to the 17-inch wheels were single-leading-shoe front and rear. With 8.5:1 compression, the "long stroke" (66mm x 72mm) engine made 16 horsepower.

In spite of a number of continental quirks — the kickstarter on the left side, and kickstand on the right — the 250 was well received and sold in increasing numbers.

The Wisconsin lasted just two seasons. For 1963, it became the Sprint C with power increased to 18 horsepower, good for a top speed of around 80mph. It was joined by the sportier Sprint H with 9:1 compression, 21 horsepower and 18-inch wheels. The

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H sported an industrial-size air cleaner can where the C model's toolbox had been and could be ordered with a high or low exhaust system. The H quickly became the more popular model, outselling the C by at least 5:1. The engine's tuning potential was demonstrated in 1964 at Bonneville, when a 250cc streamliner recorded over 150mph, then stretched that to 177mph in 1965.

1967 brought an engine redesign, creating the "short stroke" 250. An aluminum cylinder of 72mm bore replaced the cast iron item, and combined with a shorter, 61mm stroke for 248.4cc and a power increase that H-D claimed to be "18 percent." The new engine was also intended to reduce oil leaks and ease maintenance by using a one-piece valve cover. The C model was dropped in favor of a new street scrambler, the SS. The H continued with the new engine, but was handily outsold by the SS.

The SS employed a smaller gas tank, 19-inch front wheel, "high boy" fenders and a tachometer; while the lighting equipment



## ON THE MARKET 1967 Aermacchi Harley-Davidson 250 Sprint SS

While 350 Sprints still seem to be fairly easy to find, the early 250 models aren't as plentiful as they used to be. We found three good examples that had changed hands in the past few years, but nothing for sale at the moment. The first was a "restored" 1963 250 Sprint H that popped up on eBay this past March, selling for \$3,500 despite a few troubles. Next was a 1964 250 Sprint H sold by Bonhams back in 2015. Original, unrestored and showing just 86 miles, it brought \$4,289. But the one that really spiked our interest was the 1967 250 Sprint SS shown here. Though the paint was roughed up a bit, it was a very original and correct bike, showing less than 3,000 miles, and it sold for \$3,500 at the Mecum Harrisburg auction in 2014. With a bit of servicing, it would be the perfect one to show and ride.



"A 5-speed gearbox finally arrived in 1973 — but by then it was too late."

became quickly detachable for off-highway use. (Though for serious competition, versions of the 250 in road-race and off-highway trim had been available as the CR, CRS and CRTT.)

1968 was the last year for the 250, and it was replaced for 1969 by the 350cc street SS350, and in 1971, the trail bike SX350. But it carried over many of the 250's anachronistic features, like the overhead valve layout, kick-only starting, 4-speed transmission, 6-volt lighting and single-leading-shoe brakes. Its Japanese competi-

## AERMACCHI HARLEY-DAVIDSON 250 WISCONSIN/SPRINT/SS

Years produced	1961-1968
Power	16-25hp
Top speed	80mph/90mph (claimed)
Engine	246cc (66mm x 72mm), 248cc (72mm x 61mm) air-cooled OHV single
Transmission	4-speed, chain final drive
Weight (dry)	261lb/271lb/281lb
Price then/now	\$750 (1967)/\$3,000-\$8,000

tion now featured twin-leading-shoe brakes, overhead cams, 5-speed transmissions and electric start. A 5-speed gearbox finally arrived in 1973 — but by then it was too late. H-D parent company AMF sold Aermacchi (and its Varese factory, where MV Agustas are now produced) to Cagiva in 1978.

*Cycle* magazine summed up the 1967 250 Sprint SS, "... we will simply say that it has brakes and handling that are beyond reproach, and that it feels ... like no amount of flogging will hurt it." **MC**

## CONTENDERS Alternatives to the Aermacchi Harley-Davidson Sprint

### 1964-67 Triumph T20SM Mountain Cub

Like many of the best Triumphs, the Mountain Cub was conceived in the U.S. — in this case as a trail bike intended to out-perform Honda's Trail 90. It married the T20S Sports Cub engine with wide-ratio gears from the TR20 Trials Cub. The factory added a tucked-in exhaust and Dunlop Trials Universal tires. An initial order for 400 units was snapped up: "We sold every one we could get," said Johnson Motors' Don Brown at the time, "and could have sold twice as many." Accessories included a rifle rack, cross-braced handlebars and an oversized rear carrier.

*Cycle World* tested one in 1964, declaring it the trail bike they'd been waiting for: "... a real motorcycle, slightly undersized, properly equipped and geared." It handled easily, steered quickly, and was "downright comfortable" on rough terrain, they said. Though basically reliable, Mountain Cubs suffered from a weak engine bottom end, not helped by the notorious "ET" (energy transfer) ignition, which required careful setup and frequent adjustment.

The Mountain Cub fell victim to BSA/Triumph rationalization, which moved Cub production to BSA's Small Heath factory. The final Cubs used a BSA Bantam chassis and cycle parts.

- 1964-1967
- 15hp @ 6,500rpm/60mph (approx.)
- 199cc (63mm x 64mm) air-cooled OHV single
- 4-speed, chain final drive
- 250lb (wet)
- \$2,000-\$8,500



### 1961-1967 Honda CL72

Honda's CL250 was more off-highway focused than the Sprint H/SS, with braced handlebars, 19-inch wheels and high level exhaust. Compared to its sibling CB250 street bike, the CL omitted the front TLS brake and electric starter — but neither were available on any of the H-D Sprints.

Common to the CB and CL models was a SOHC parallel-twin engine with a built-up, 180-degree crankshaft driving both the camshaft and clutch by chain. Battery/coil ignition sparked mixture from two 22mm Keihin carbs. The wet-sump crankcase was split horizontally and also contained the 4-speed gearbox. The CL72's engine slotted into a closed loop tubular frame with a single downtube (open loop on the CB). A hydraulic steering damper was a stock fitment.

*Cycle World* was duly impressed with the CL72's power delivery. "It will pull strongly almost from idle, and when those revs begin to gather, it will really storm along," CW said, and also praised its handling: "... outstanding was the Honda's behavior on more firm dirt and clay."

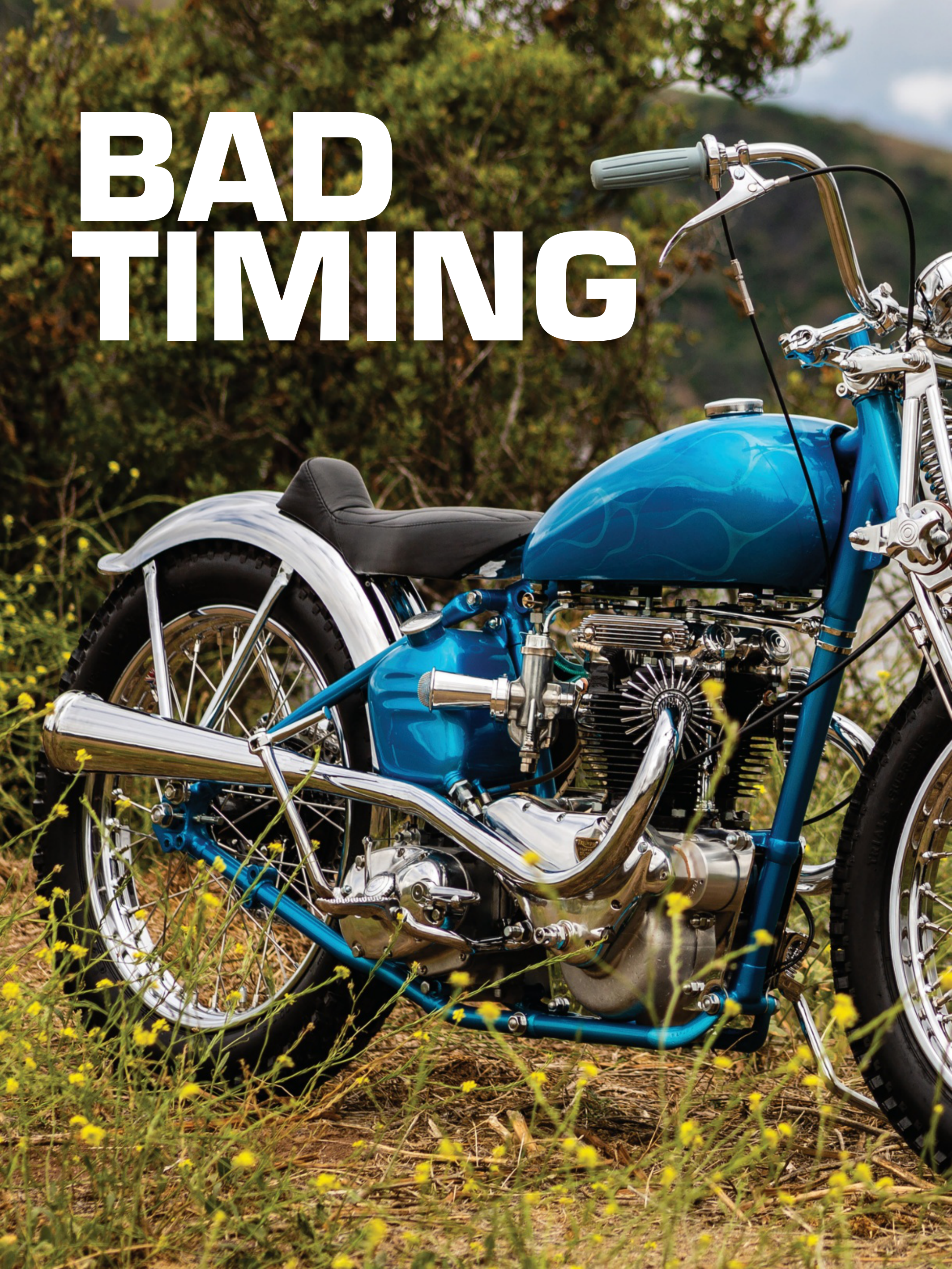
Noting that at that time Honda built some 85,000 motorcycles a month, CW concluded, "... careful mass-production is the reason for the Honda's neat and clean appearance, and its very reasonable price."

- 1961-1967
- 24hp @ 9,000rpm/87mph (period test)
- 247cc (54mm x 54mm) SOHC air-cooled, 180-degree parallel twin
- 4-speed, chain final drive
- 315lb (wet)/45-65mpg
- \$690 (1962)/\$3,000-\$12,000





# BAD TIMING







# A custom Triumph T110

Story by Greg Williams  
Photos by Jonny Bourgault

**A**n opportunity can come at an inopportune moment.

Just ask Jason Friend. When he was invited in late August 2018 to build a custom motorcycle to appear in late June 2019 at the Born Free II show in Los Angeles, California, he says the request came completely out of the blue. While Jason was excited about the opportunity, he'd just moved his young family from the San Francisco Bay Area to Phoenix, Arizona, and didn't really have the funds or the time to dedicate to such a project.

"But I talked to my wife, Lori, about this and asked if she thought we could pull it off," Jason says. "I'd set a bit of money aside from the sale of the house in California to build a shop here in Phoenix, so I did have some money, it just wasn't meant to be for a bike.

"I figured I likely wouldn't be asked again, though, and this was my one shot at building a show-quality Triumph."

## From mini-bikes to Brit bikes

Jason grew up in the early 1980s in Ney, a small town in northwest Ohio where he was a self-professed mini-bike mad pre-teenager cruising around the family's couple of back acres. While living in that town, the only motorcycles he thought existed were Hondas and Harley-Davidsons. Obviously, there wasn't much exposure to other brands but by the time he was in his early 20s, Jason was riding on the street aboard early to mid-1970s Japanese motorcycles.

As he began exploring the internet and joining forums such as *The Jockey Journal*, he became aware of British motorcycles, and became fascinated by pre-unit Triumphs. Jason got his first pre-unit when he swapped his 1963 Ford Galaxie with one forum member for a 1962 Triumph Bonneville chopper.

In 2005, he moved to California with the Triumph and a 1980 Honda CB750. When he got there, he sold the larger Honda and began buying, customizing and selling more 1970s Japanese machines.

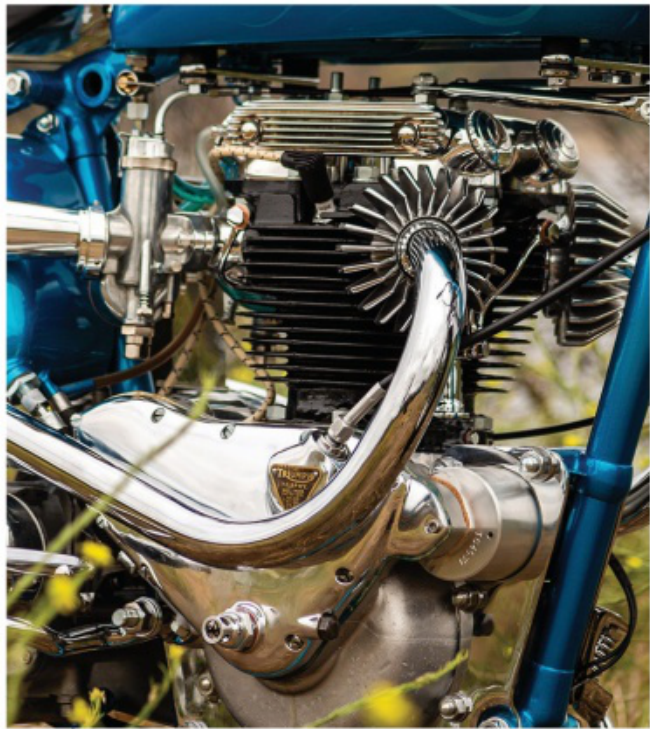
"I started getting really good at horse trading," Jason explains. "And I could find Triumphs listed on Craigslist. Eventually the Japanese stuff was left behind, and one Triumph became two, and then three — they just started multiplying."

## The Green Dragon

One of those Triumphs was a vintage chopper nicknamed the Green Dragon. Found tucked away in a shed by a friend in Oregon, the bike's rigid frame was originally produced by the Triumph factory in 1951 and was from a 6T, or Thunderbird, model. A clapped-out 1954 T110 engine was in the frame and this was all topped off with a king/queen saddle wrapped in brown vinyl, ape hanger handlebars, an extended front end and, of course, green paint. As discovered, the bike was a dusty, oily mess but Jason bought it from his friend and squirreled it away.

At the same time Jason began accumulating complete Triumphs, he also began acquiring many cast-off Triumph parts that no one else seemed to want, such as bent and





## TRIUMPH T110

**Engine:** 649cc air-cooled OHV parallel twin, 71mm x 82mm bore and stroke, 8.5:1 compression ratio, 42hp @ 6,500rpm (in stock trim, w/o dual carbs)  
**Carburetion:** Dual Amal 376 Monobloc 1-1/16in  
**Transmission:** 4-speed, chain drive primary and final  
**Electrics:** 12v Alton generator and BTH magneto  
**Frame/wheelbase:** Steel full-cradle type, 56in (1422.5mm)  
**Suspension:** BSA girder front, rigid rear  
**Brakes:** Dual 7in (178mm) drum front, 7in (178mm) drum rear  
**Tires:** 3.5 x 19in front, 4 x 19in rear, both NOS Avon Trials Supreme  
**Weight:** Unknown  
**Seat height:** 28in (711mm)  
**Fuel capacity:** 2.5gal (9.5ltr)



The bike wears Amal Monobloc carbs with chromed velocity stacks (above).

cracked frames or other nearly worn-out pieces. Much of this collection was placed on shelves, waiting for the day the pieces could be salvaged and repurposed on another Triumph.

When the Born Free invite came, the Green Dragon earned a new nickname: Bad Timing.

"I'd had an idea percolating for a long time about what I wanted to do with that old Triumph," Jason says. "I didn't really expect to be moving on it so soon, but about four months earlier on eBay, I'd found a 1938 BSA De Luxe girder fork with a really cheap Buy It Now price and

I'd snapped that up, intending to run it on the Green Dragon project."

Of the direction he wanted to go for the Born Free build, he says, "for Born Free, it seems a lot of the bikes tend to go for a '60s show bike look, which I really like. There are different shades of that, but I was inspired by a different era and the bikes of the late 1940s and early '50s, those with girder forks and ram's horn headers."



Builder Jason Friend and his custom Triumph T110, Bad Timing.





## Deconstruction

Working in his Phoenix garage, Jason got started by dismantling the Triumph and media blasting the frame and fork. His next step was figuring out a way to get the larger diameter BSA girder fork steering stem to fit the Triumph bearing cups. Eventually, he decided to open up the cups by 1/16 inch so the stem would fit through. He found help doing that from a former NASA engineer in Colorado. Also, the BSA stem was too short by an inch, so Jason cut it in the middle and welded in a stepped spacer to make up the difference.

"I was really concerned about the angle that the bike would sit at with the girder fork," he says, and adds, "I was really happy to see the stance when I initially mocked it up with a 19-inch wheel up front and a 19-inch wheel out back."

Mock-up continued using a Triumph TRW gas tank. With the machine on the ground, however, Jason says the tank — originally meant to fit the flathead 500cc military Triumph — was just too big. He went on the hunt for a mid-1960s Triumph T100SC tank and found one from a fellow enthusiast in a Facebook Triumph group. "It looks much like a TRW tank, but scaled down," Jason says.

To make the T100SC tank fit, the top front section of the tunnel was heated with a torch and curved up. This allowed it to sit lower over the top frame tube, making everything more aesthetically pleasing to Jason's eye.

Wheels are both 19 inches in diameter and Jason used chrome rims from Central Wheel Components ([central-wheel.co.uk](http://central-wheel.co.uk)). At the rear, an original Triumph rigid hub was put into service. This uses a 9/16-inch-diameter axle and tapered roller bearings instead of the larger diameter 25/32-inch axle and ball bearings of the swingarm Triumph hub. On the rigid brake backing plate, there is a nose on the pivot pin that engages a slot in the left frame dropout to act as an anchor.

Up front, Jason modified two front hubs by splitting each in half and marrying them together so he could run dual 7-inch brake drums. This is a modification he's seen on a few

race bikes of the 1940s in archival photographs. Initially, he was planning to cast aluminum brake backing plates but the clock wasn't working in his favor. Instead, he used two 7-inch rear brake backing plates with the dust covers removed. The brake stay stud on one was relocated, and new actuating levers and trim rings — to cover the brake drum lips — were cut on a water jet. The rings were welded into position and ground smooth.

To make this dual-drum setup work, Jason enlisted the help of Kelly Haifley of Haifley Brothers Hot Rods & Motorbikes in Phoenix ([haifleybrothers.com](http://haifleybrothers.com)). Jason made a custom wishbone to operate the dual brake rods, and this was mounted behind the main blade of the girder fork. It's a single cable to a dual-rod-operated affair, and all of the fittings were brazed to the BSA



The chrome 1938 BSA De Luxe fork is a show-stopper.





The vintage Do-Ray headlight was another piece that came from Jason's stash of parts (far left).

fork tubes. While on the subject of the fork, it also has custom dual dampers with one-off adjusting knobs. The made-in-Chicago Do-Ray headlight was mounted on a flange that began life as a Harley-Davidson floorboard mount, and Jason modified a Triumph steering damper and made a custom lower yoke insert to make it all work. All other unnecessary tabs were shaved off.



### More custom touches

From Ace Classics ([aceclassics.co.uk](http://aceclassics.co.uk)) Jason ordered their complete rear fender to fit 1937 to 1948 Triumph motorcycles. It's a two-piece fender with V-shaped mounting brackets. Jason was going to modify this fender by bobbing it and working in a ducktail tip.

"The more I looked at it, the more it looked like a lot of work and I'm only capable of so much fabrication, especially with sheet metal," Jason allows. "That's when I spoke to Joe Cooper."

Joe Cooper operates Cooper Smithing Co. ([coopersmithingco.com](http://coopersmithingco.com)) in Washington state, and he manufactures handmade motorcycle fenders. The pieces he produces are quality, hand-hammered items, and he says he likes the challenge of producing a unique fender design submitted by a customer.

"I have a 1957 Triumph Tiger Cub fender and it has a real sharp ducktail on it," Jason says. "Plus, I came up with a tri-rib design, where the two outer ribs terminate a few inches from the end of the fender. I drew a few sketches and took some pictures of the Cub fender and sent them to Joe. He made this fender, and I can't say enough positive things about Joe's work."

From the Ace Classics rear fender, Jason harvested the mounting brackets and narrowed them by 1-1/4 inches and mounted them to welded-in-place threaded bosses he added to the underside of Joe's fender. He also cut out the stock metal plate on the 6T frame where the original fender would have bolted in place at the top and welded in a nicely arched tube.

For a seat, Jason made a metal pan that was inspired by a Bates TT-style saddle. A leather cover was stitched by Sallie Hartdegen of Haifley Brothers. On the Triumph frame, a front mount was welded to the top tube and the original solo seat spring mounts were removed from the upper rear frame stays.



The ducktail custom rear fender was hand-made by Joe Cooper of Cooper Smithing Co. in Washington state (above middle).

### Engine work

Usually, Jason likes to build his own engines. On Bad



Timing, however, he enlisted the help of Ryan Mullion of The Tiger Shack in Orange, California. It was a crank-up restoration, and Jason had to find a new unit-Triumph crankshaft, new unit TR6 cams, a five-fin T110 iron head and eight-stud pre-unit barrels, plus a timing side tach drive cover and Smiths tachometer.

"Ryan said it was the worst motor he'd ever had to start with," Jason says, and adds, "it had a laundry list of issues."

But Ryan forged ahead, and the aluminum cases were vapor blasted clean and rebuilt with a restored oil pump and all new bearings and gaskets. A BTH magneto provides the sparks while an Alton generator makes power to charge the battery. The overhead rocker oil feed is a steel MCM item and the splayed dual carburetor manifolds are Webco originals fitted with new Amal 376 Monoblocs.

The exhaust was made up of stock 1960 to 1962 Triumph TR6 high-level pipes, tweaked to sit level, and capped off with 16-inch Superior trumpet tips welded to the ends. Inside the 16-inch trumpets, Jason welded in 8-inch Superior tips and added spherical honeycomb mesh in the ends.

"At this point, I was officially running out of money," Jason laughs. "I had set a lot of stuff aside to be chrome plated, and my quote was astronomical. Luckily, I ran into a local hot rod guy who takes his stuff down to Mexico — and that's where most of my stuff got done. Even the fasteners, which are all correct British threads, were chrome plated."

For the frame, oil tank and gas tank, Jason packaged it all up and shipped it to Jay Medeiros and George Quirk of DGB Paintworks in New Bedford, Massachusetts. He wanted it finished in blue and mentioned to Jay a House of Kolors Oriental Blue and a Honda Trail 70 blue that was popular in the 1970s. Jason also requested a minimalist flame on the tank. Jay custom-mixed his own blue, and George Quirk laid down the flames.

As the parts and pieces came back from the finishers, Jason assembled Bad Timing in record time without too many last-minute issues. And, just 30 minutes before dark the evening he and Lori loaded up and headed for Born Free, Jason added fluids and fired up the Triumph. It started right up, he says, and that remains to be the case. Follow Jason on Instagram — his username is the tongue-in-cheek



@edwardturnerlives — a nod to the designer of Triumph's parallel-twin engine motorcycles.

## Born Free

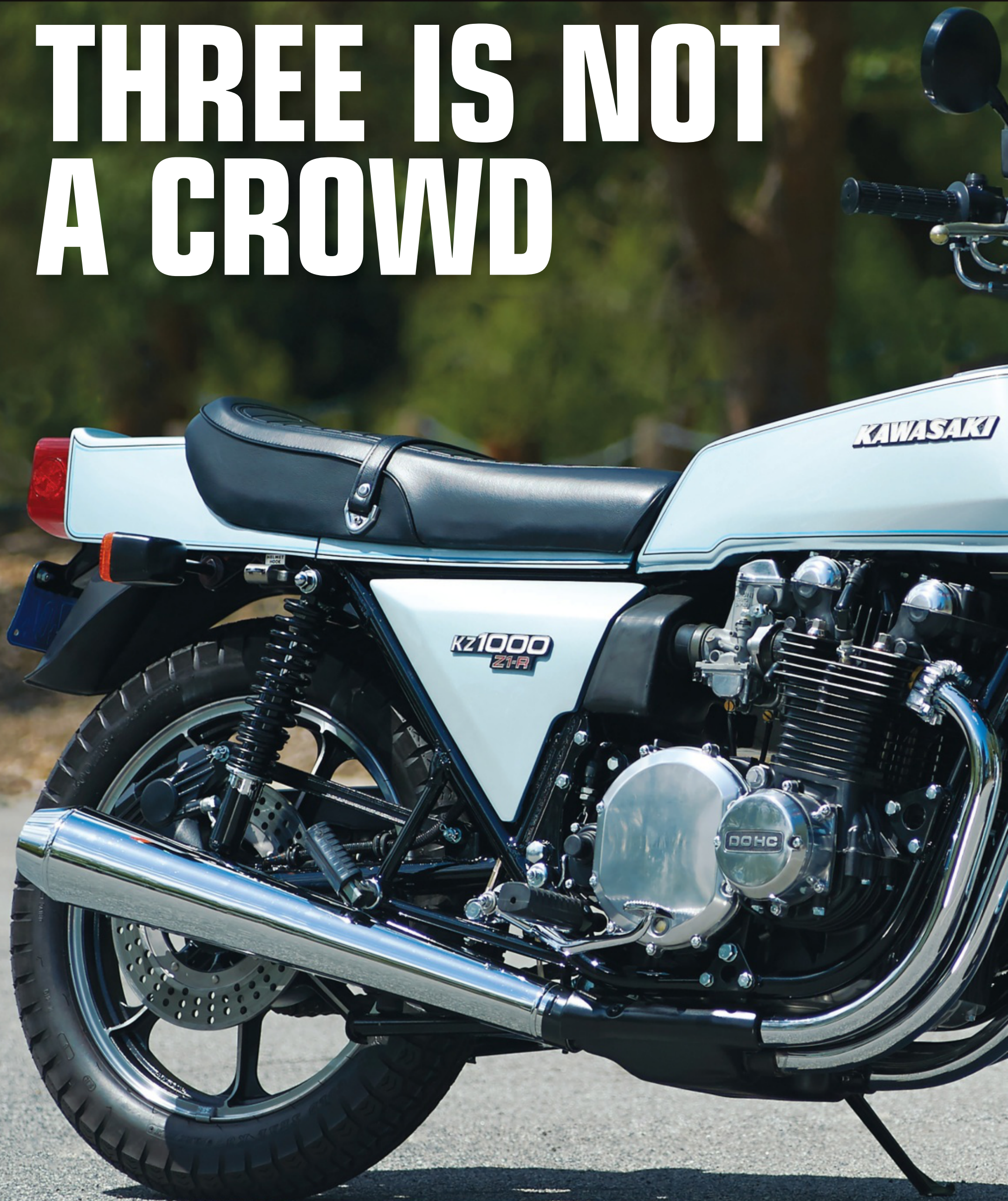
At Born Free, Bad Timing received plenty of attention, and Jason enjoyed meeting many of the other Triumph faithful, including Hello Engine's Hayden Roberts, Thompson's Cycles' Bryan Thompson, and also Tom Heavey, David Morales and Nick Heer.

Of the 10-month adventure, Jason says he was humbled to have been asked by Born Free show organizers Mike Davis and Grant Peterson to assemble a motorcycle. He also had help from a number of people who lent an ear and provided advice, but it was his family who understood his commitment and Jason says they were the best cheerleaders one could ask to have.

"I'm usually pretty nit-picky about my bikes when I'm finished building them," he concludes, but adds, "Even though the opportunity really was bad timing, I felt pretty positive about this Triumph." He should. Bad Timing won Best British at the 2019 Born Free event. **MC**



# THREE IS NOT A CROWD







# 1978 Kawasaki Z1-R

Story by Margie Siegal  
Photos by Nick Cedar

**T**race St. Germain has a business restoring motorcycles, and like most people who have a business restoring motorcycles, he has a few of his own. Three of them are 1978 Kawasaki KZ1000's. He has one to ride, one to drag race and one (the bike in the photos) to show. It was — literally — found in a barn.

Trace and his Z1-R's have a lot of history together. It all started when Trace started drag racing. He was a young lad then, "trying not to do it on the street. I met some guys and got interested in racing on a track, instead of on the street, like I had been. I won first time out on a Honda 350."

Racing got interrupted for a stint in the military. Trace spent downtime reading all the motorcycle magazines and became interested in big-bore Kawasakis. "I really wanted to buy one after they went to 1,000cc." Home on leave, Trace visited his local dealer on a Friday, parted with \$2,900, rode out with a new 1978 Z1-R with a Kerker pipe — and kept going. He was back at the dealer on Monday for the first service, with 750 miles on the clock. That bike is still his street ride. It now has about 50,000 miles on it, much of which was clocked on two cross-country trips. Trace's first Z1-R has been treated to a frame stiffening kit and a welded crankshaft. A friend liked the stock tank and offered to trade a larger tank that was similar to the tank Kawasaki was then selling on bikes exported to Europe. Trace wanted more mileage between fill-ups and jumped on the deal.

Injured in the military and medically retired, Trace fretted about the amount of time it was taking to recuperate. Rehab went a lot better after he found a second 1978 Z1-R that had been in a rear end collision. Trace built up his second Z1-R into an AMA Ultra Stock drag racer, prepped to be just barely legal for this class. It is bored out "one step over," and has higher compression pistons, a longer swingarm, a plugged front end and wire wheels, front and rear. Weight has been shaved in every place possible. It now turns the quarter-mile in 9.3 seconds with a terminal speed of 140mph. "The Z1-R has a powerful engine, and it's rock solid. I'm using the stock transmission except for second gear. The stock transmission is good up to 160mph and seven second times, then you have to go aftermarket."

## Beginnings

The Z1-R was a direct descendant of the 1972 900cc Z1, Kawasaki's answer to the Honda 750 Four. The Z1 had double overhead cams, an unbreakable bottom end, produced a claimed 82 horsepower and had a maximum speed of 130mph. While the handling was not ideal, for many riders, the reliability and horsepower of the





## 1978 KAWASAKI Z1-R

**Engine:** 1,015cc air-cooled DOHC inline 4-cylinder, 70mm x 66mm bore and stroke, 8.7:1 compression ratio, 90hp @ 8,000rpm (factory), 73.13hp @ 7,500rpm (period test)

**Carburetion:** Four 28mm Mikuni VM28SS

**Transmission:** 5-speed, chain final drive

**Electrics:** 12v, coil and breaker points ignition

**Frame/wheelbase:** Dual downtube steel cradle/59.3in (1,505mm)

**Suspension:** Telescopic forks front, twin shock absorbers w/adjustable preload rear

**Brakes:** 11.67in (296.5mm) dual discs front, 11.43in (290.5mm) single disc rear

**Tires:** 3.5 x 18in front, 4 x 18in rear

**Weight (dry):** 542lb (246kg)

**Seat height:** 32.08in (815mm)

**Fuel capacity/MPG:** 3.4gal (13ltr)/43.9mpg (period test)

**Price then/now:** \$3,695 (list)/\$4,000-\$13,000

big Four made up for its shortcomings. This popular machine soon spawned variants, including the 750 and 650 versions built for countries where the tax structure made owning a 900 expensive, and the LTD cruiser of 1976, the first bike with cruiser styling.

In 1977 the Z1 was bumped out to 1,015cc, probably to cope with emissions regulations that had decreased the horsepower of later versions of the Z1. The new KZ1000 had triple disc brakes and a 4-into-2 exhaust, but the styling was very much like the Z1 of five years earlier. That all changed with the Z1-R.

### The Z1-R

The Z1-R, released in 1978, was eye-catching. It sported café-racer styling, including an angular tank, tailpiece and a bikini fairing, all painted metallic silver. Engine upgrades and an innovative 4-into-1 exhaust produced a claimed 90 horses at 8,000rpm. Two of Kawasaki's American executives, Graham Kirk and Wayne Moulton, had come up with the design concept in 1974, and worked with Japanese executives

H.P. Otsuki and T. Takahashi to flesh out the idea. The stylist who translated the idea into sketches was "Cowboy Chris" Kurishima. The first mock-up appeared in 1976, and advance publicity started in 1977.

At the time, Kawasaki was developing a new model range, which was far from ready, and needed time to finish the R&D work on the new bikes. The KZ1000, although saddled with the existing and outdated frame and engine, had enough horsepower and style to keep consumer interest while the bugs were worked out of the next generation bikes.

Café racers had been developed by urban English riders of the mid-Sixties, who customized their bikes to perform on twisty roads just outside of town. In the late Seventies, several manufacturers, newly interested in handling as well as horsepower, picked up on the café racer look to signal that their machines would perform on a curve. Ducati had always been interested in handling, (its 900SS was a beautiful Italian take on the café-racer concept) but Kawasaki's Z1-R, like Harley-Davidson's XLCR







and BMW's R90S, was a departure for the company.

The Z1-R featured several advances. Aside from the steel tank and front fender, all the bodywork was either fiberglass or injection-molded plastic. The quarter fairing was the first on a Japanese motorcycle. The 7-inch quartz halogen headlight was not a motorcycle first, but was state of the art for the time, and one of the first on a motorcycle built in Japan. The black coating on the engine was not painted, but laid down by an electrical process that provided a durable finish. Triple disc brakes featuring drilled rotors and a cable operated remote master cylinder on the front brake were also a Japanese bike first. The self-canceling turn signals were a first for Kawasaki.

### On the road

Contemporary magazines liked the Z1-R. They liked the styling and the silver paint, but what really got the attention of period testers was the increased horsepower, due to the larger carburetors and the improved exhaust system. *Cycle* magazine managed to wring an 11.95-second quarter-mile time out of their test bike and put the feat on the front cover of the magazine. *Cycle World* wondered what the maximum speed would be — their test track wasn't long enough. The factory claimed a top speed of 130mph.

The rest of what period testers liked about the Z1-R was what they had always liked about Kawasaki Z's: the powerful but reliable engine, with loads of midrange power, the five well-spaced gears and the quiet exhaust. They tiptoed around the okay but not perfect handling, having to point out that although the swingarm had been treated to needle roller bearings and the front downtubes had been reinforced with a

heavier gusset over the steering head, what was really needed was the new frame design that was still a year or two away. *Cycle* also pointed out that the suspension was "substantially oversprung and slightly underdamped," and the fork springs were too harsh, producing a ride that could be unpleasant over bumps. *Cycle World* said the Z1-R "doesn't like sudden changes in direction."

Both magazines agreed that, on smooth pavement, the seat was surprisingly comfortable, the riding position was good, and the fairing worked well as a wind deflector, in addition to being a styling plus. Trace testifies to the abilities of the Z1-R

as a mileage eater — his two coast-to-coast jaunts were accomplished comfortably and in good time.

Most Kawasaki owners of the time liked their bikes. *Cycle World* did a Kawasaki owner survey in 1980, and it included the owners of 16 Z1-R's. Riders said the best features of their Kawasakis was their reliability, speed and power, and the worst feature was their handling. Despite awareness of the faults, 88 percent of owners said

they would buy another Kawasaki. The shortcomings of 1970s Kawasakis in the handling department gave a marketing opportunity to aftermarket frame manufacturers, such as Kosman and Rickman, and builders of frame stiffening kits.

Some 17,000 of the D1 version of the Z1-R were built for the 1978 model year. The D2 (1979) version was not imported to the U.S. In its place, Kawasaki introduced the KZ1000 MkII, with the improved frame, forks, and front and rear suspension that Kawasaki's engineers had been working on for several years. For 1980, the Z1-R reappeared as the D3, minus the silver paint, and with the updated frame, suspension and

"Trace had stockpiled Z1-R parts over the years, and this project made a good dent in the parts bin."





steering geometry from the 1979 Mk II. A 19-inch front tire helped with road-holding. By this time, Kawasaki had finished the R&D on the next generation of Superbikes, and the Z1-R again faded from the lineup in 1981. Only 3,300 of the D3's were produced.

### Z1-R No. 3

In the meantime, Trace bought a faster drag racer and gave his Z1-R dragger to his son, who was following in Pop's racing. Several years ago, Trace got the bike back. "I realized it was more fun to run. It's very consistent, and I can make my pass and ride back to the pits. The more powerful bike had to be towed back. Also, it looks old school and gets noticed. People give me compliments."

The show bike (Trace's third Z1-R) was found about a year and a half ago laying on its side in a barn. Mice had eaten

the seat, and were using the airbox and exhaust as a hotel. The person who found it put it on Craigslist. Trace was idly poking through the website one day — and there it was. He made a deal and brought it back to his shop. Trace had stockpiled Z1-R parts over the years, and this project made a good dent in the parts bin. As he explains: "I had to replace the cylinders — the originals were corroded. Luckily, I had another set of cylinders. The pistons were great. All I had to do was replace the rings and hone the cylinders. The valves were good and the lower end was good. The wiring harness had been hacked up, and I replaced it with the wiring harness from my race bike."

"There was a little rust in the pipes, and I had to have them rechromed." Rechroming was a multi-step process, involving cutting the exhaust into pieces and rewelding them. "I rewelded using the same process as the Kawasaki factory,"



The exhaust looks perfect now after major surgery and rechroming (left). The front and rear brakes were also totally rebuilt.





The Z1-R's big 1,015cc inline four puts out a claimed 90 horsepower (far left, facing page). The café-racer styling carries through from the bikini fairing all the way to the angular tailpiece (left).

bike together. The Z1-R was finished the end of April 2019, and taken to The Quail Motorcycle Gathering in Carmel, California, two weeks later. It took home the second place trophy in the Japanese class.

1970s big-bore Kawasakis are known to be reliable, and they continue to be reliable as long as the oil is changed on a regular basis. "It's a maintenance-free bike," Trace says. "I occasionally flush the hydraulic brakes. I change the oil and check the valves once a year. The oil should be changed every 2,000-3,000 miles. I like to run the valves a little looser than factory recommendations, which is the general consensus of mechanics. The factory manual says 2-4 thousandths, and I set the valves at 4-6 thousandths."

"With the little fairing, I don't get beat up as much on the long hauls. The stock bike is not the best handler, which is why everyone bought those frame stiffening kits. It's great for big sweepers and long distances. The cable operated master cylinder works well, but has a slightly spongy feeling."

"When I ride my bike on the street, I turn heads. I know this bike inside and out. I have always liked the styling. I have other bikes, but I don't have the attachment to them like I do to my Z1-R's." **MC**

says Trace, who likes to keep things original. "The brakes were bad, and I had to rebuild the master cylinder and calipers, and hone the master cylinder. Finding a rebuild kit for the front brake master cylinder (a Z1-R-only item) took months. I finally found one in England."

Trace has learned to work efficiently. He starts a project by disassembling the motorcycle, and making lists of items that need to be replaced, items that need to be rebuilt, items that need to be repainted and items that need to be rechromed. Then, he gets the parts that need to be sent out to the painter and the chrome shop together, sends them out, and starts looking for replacement parts while he rebuilds and refinishes items that will be refurbished in-house. As a result of Trace's organized approach, once all parts were on hand and ready to be reassembled, it took him three weeks to put the whole

**YOUR  
VISION**

**OUR  
PARTS**



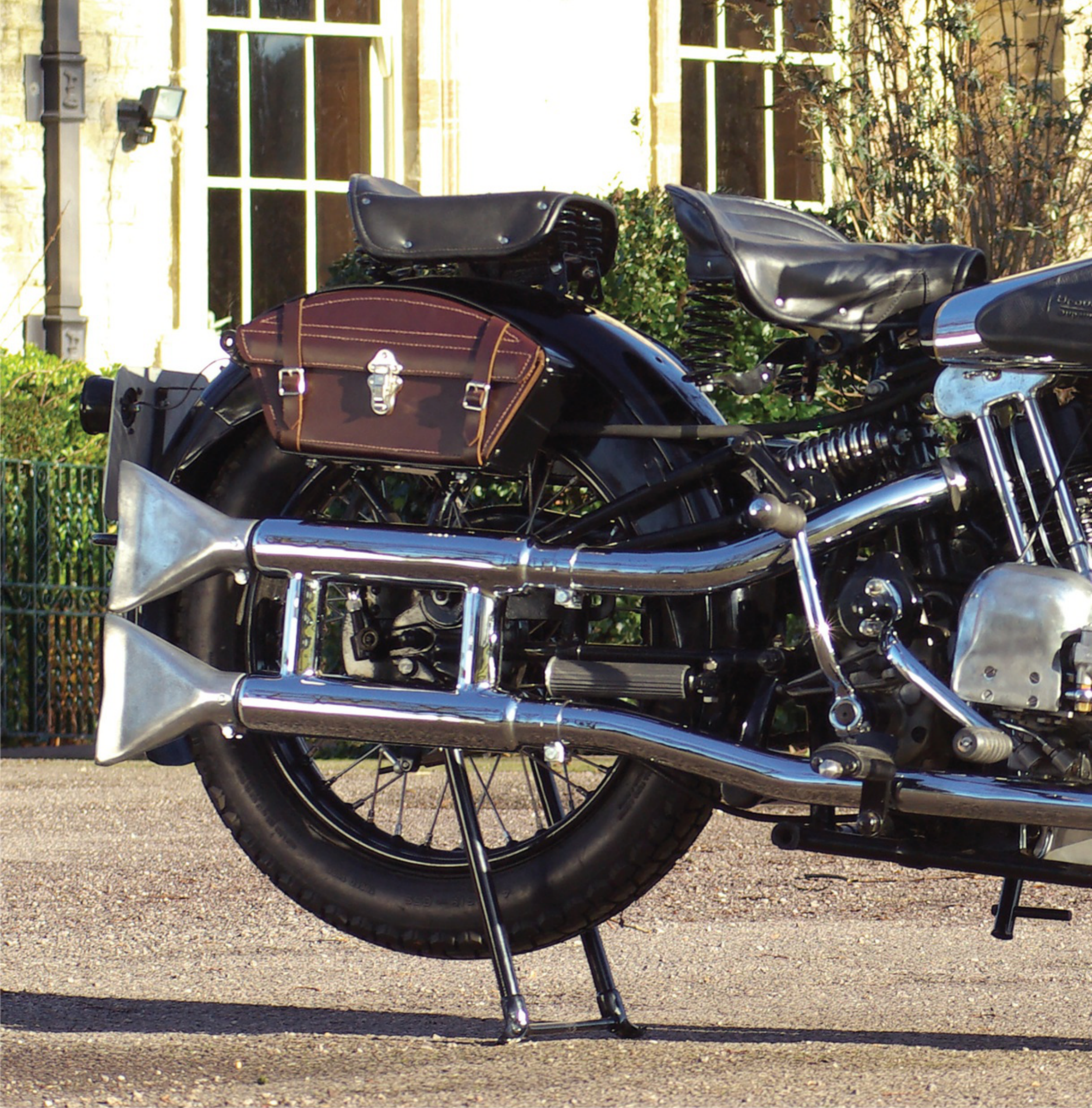
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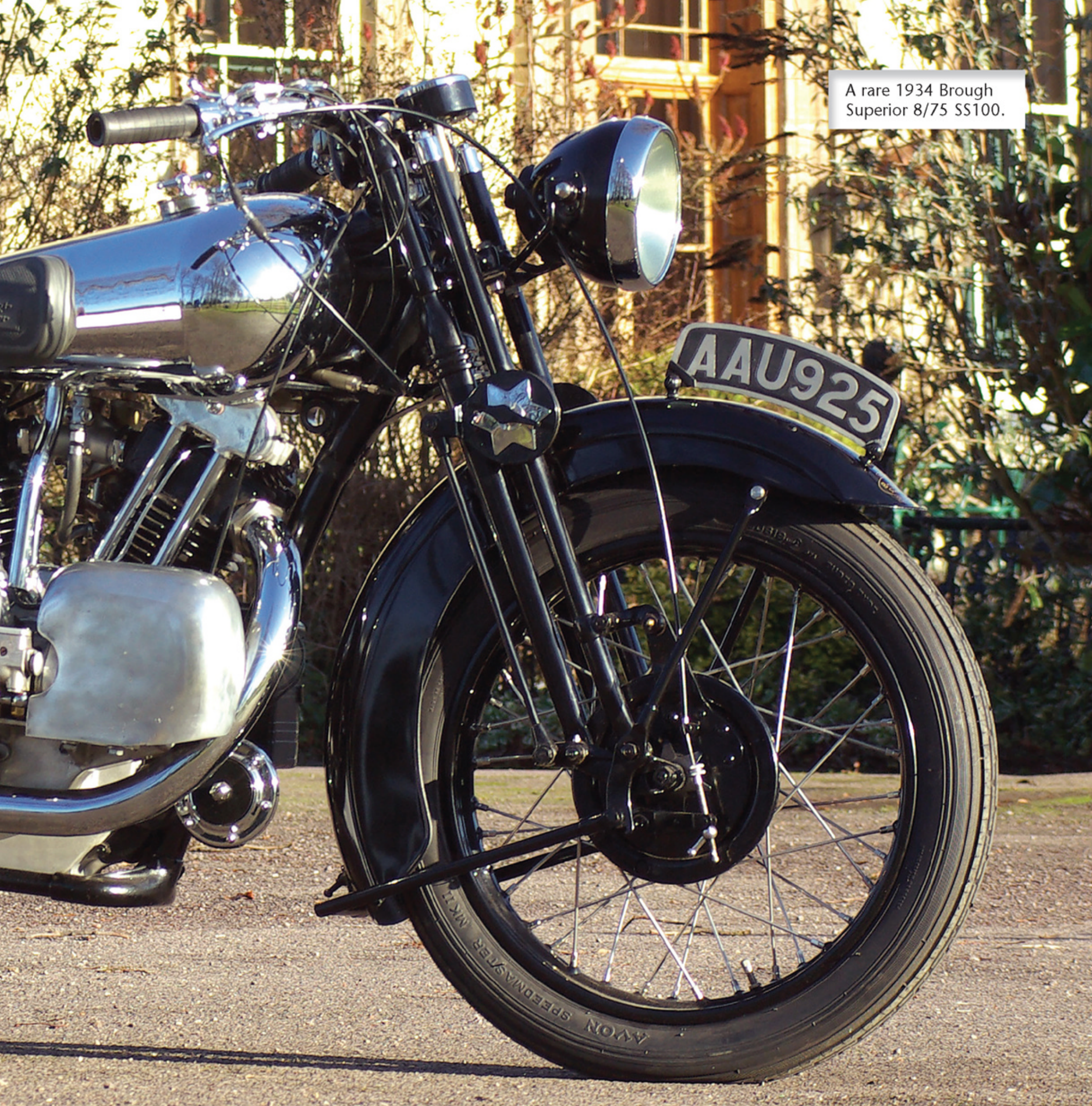
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# 100 YEARS OF BROUGH SUPERIOR



A high-quality photograph of a 1934 Brough Superior 8/75 SS100 motorcycle. The bike is shown from a front-three-quarter view, highlighting its polished chrome engine, headlight, and fenders. The front wheel features a spoked design with a black tire. A license plate with the number 'AAU925' is mounted on the front fender. The background shows a blurred residential setting with trees and a house.

A rare 1934 Brough  
Superior 8/75 SS100.

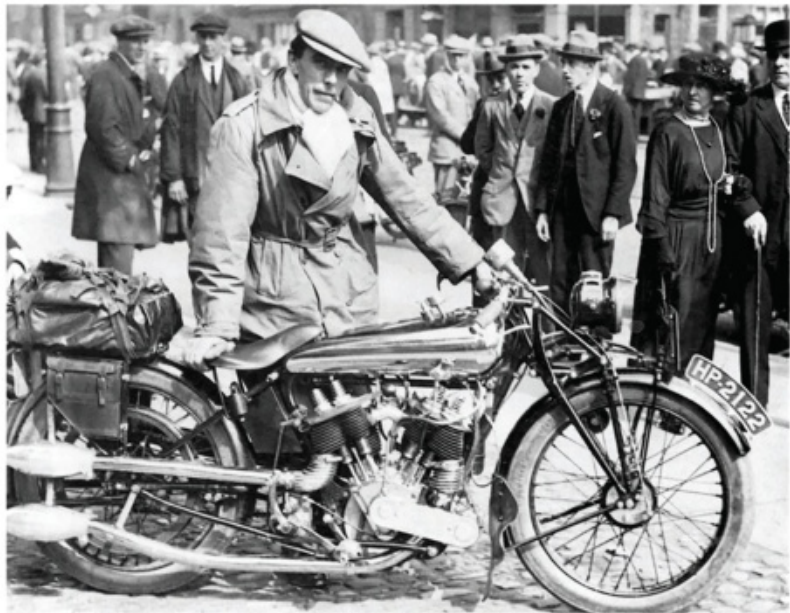
# The Rolls-Royce of Motorcycles

Story by Alan Cathcart

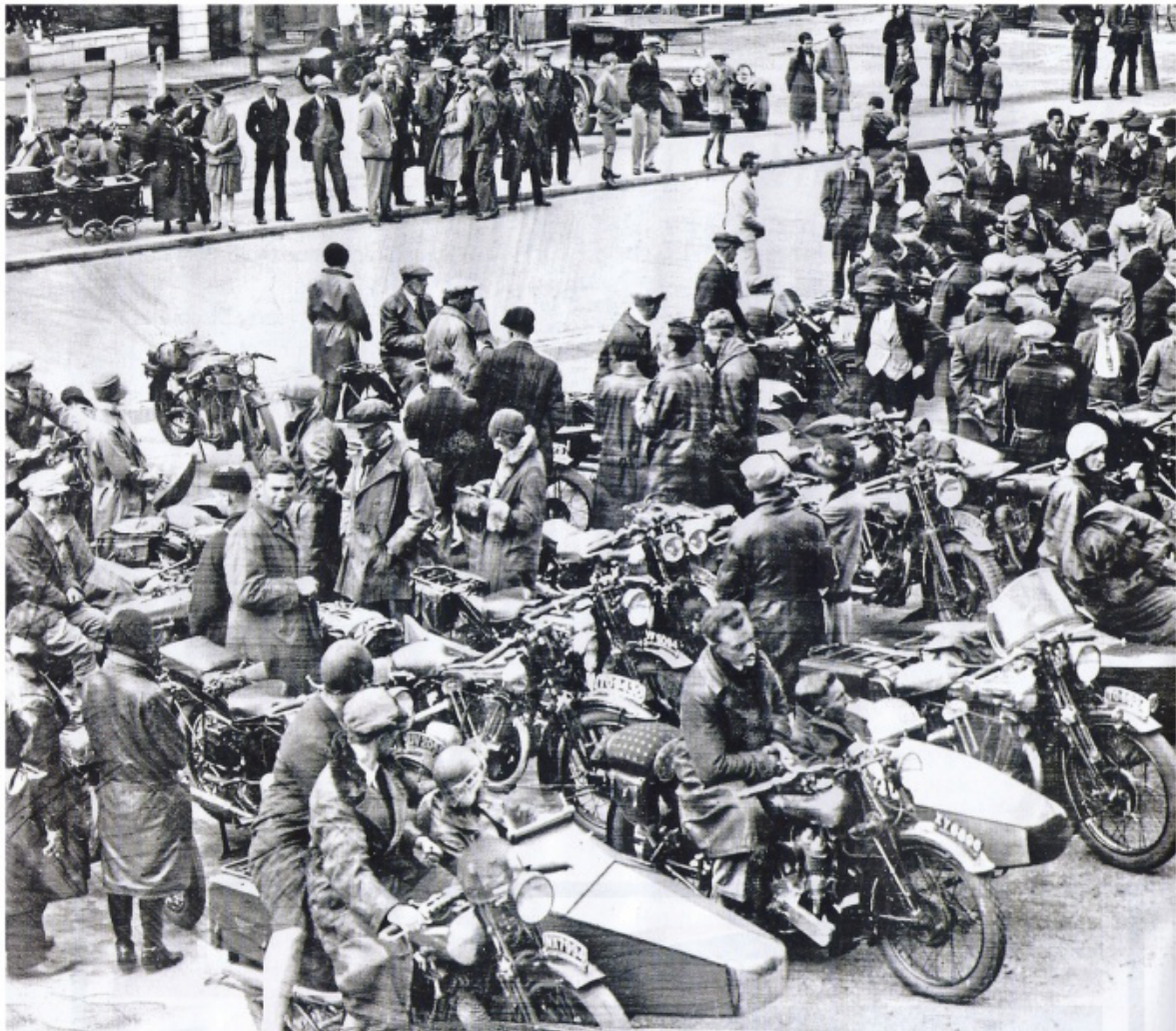
**G**eorge Brough didn't have to coin the cherished "Rolls-Royce of Motorcycles" slogan himself that he used to promote the prestigious range of motorcycles built under the Brough Superior name at his Nottingham works — a *Motor Cycle* magazine road tester of one of his early bikes did it for him first, in print.

But it's a mark of the respect with which his products were held in the pre-World War II era that nobody ever questioned the validity of such an implicit boast. Until, that is, one day a man from Rolls came calling, requiring Brough to cease and desist from infringing his company's trademark, else there'd be legal retribution. After an abortive attempt to talk his way out of trouble, Brough hit on the plan of showing his visitor around the small factory, where by chance his hand-picked team of skilled artisans were preparing the bikes due to be displayed





The man himself, George Brough (above). A Brough Superior owners rally in 1929 (right). The 1934 8/75 SS100 (far right).



on the BS stand at the forthcoming Olympia Show in London. To prevent their fingerprints soiling the gleaming finish of these show bikes, the workers had donned white gloves — allowing Brough to infer that this was the normal *modus operandi* for such a high-class motorcycle operation, well worthy of being likened to R-R. The visitor — a high-up executive in Rolls-Royce — was so impressed, Brough got explicit permission to continue using the slogan — and so the tag stuck.

Others — not only rival HRD-Vincent owners, but also those unable to afford what was always an extremely expensive machine — decried Brough Superiors as “bitzas.” This was due to the fact that, apart from the boxer-engined 4-cylinder Dream whose development was cut short by the outbreak of war, Brough Superiors were only ever propelled by proprietary, bought-in engines and gearboxes, rather than those developed in-house. But, like Bimota half a century later, this allowed Brough to focus completely on building its own frames, and delivering a level of performance and quality of manufacture, allied with benchmark looks and matchless rideability, that Brough’s few rivals could never aspire even to equal. For once, a much-vaunted product surely lived up to its billing, combining superlative workmanship with breathtaking performance for the era, and functional beauty with practical engineering. These were bikes that demanded to

be admired, but also to be ridden hard. They were the first true Superbikes in motorcycle history.

In fact, there were originally two Brough motorcycle companies, with George’s father W.E. (William) Brough starting his own car and tricycle marque in 1898 under the family name, and going on to build the first of several flat-twin motorcycle models in 1902. Initially, George worked alongside his dad, becoming a well-known rider in races and trials on Brough machines, before they parted ways exactly 100 years ago in 1919, when George wanted to build a luxury sports model, and W.E. did not. Although their rival ranges of models never overlapped, William’s humor at the split was not improved when George called his new marque Brough Superior, commenting when the proposal to do so reached his ears that “presumably this makes my product the Brough Inferior?”

The first “BrufSup” machines took to the roads in 1921, and the new marque swiftly built a formidable reputation for itself,

A Brough Superior SS80.







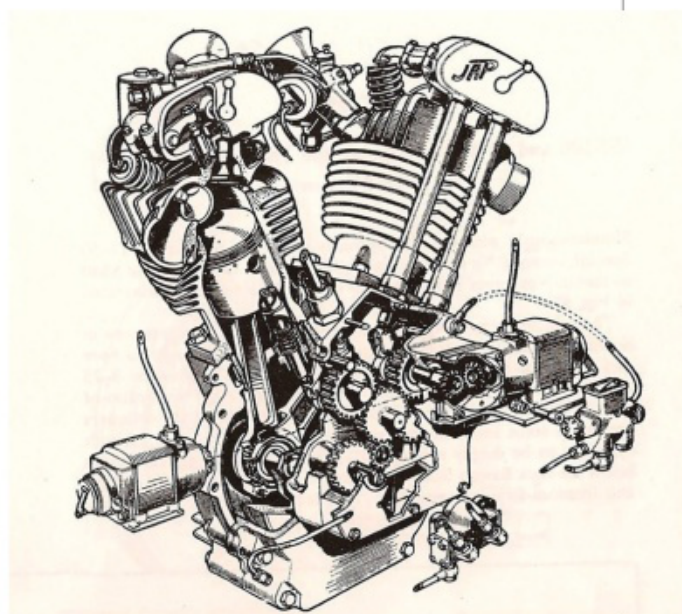
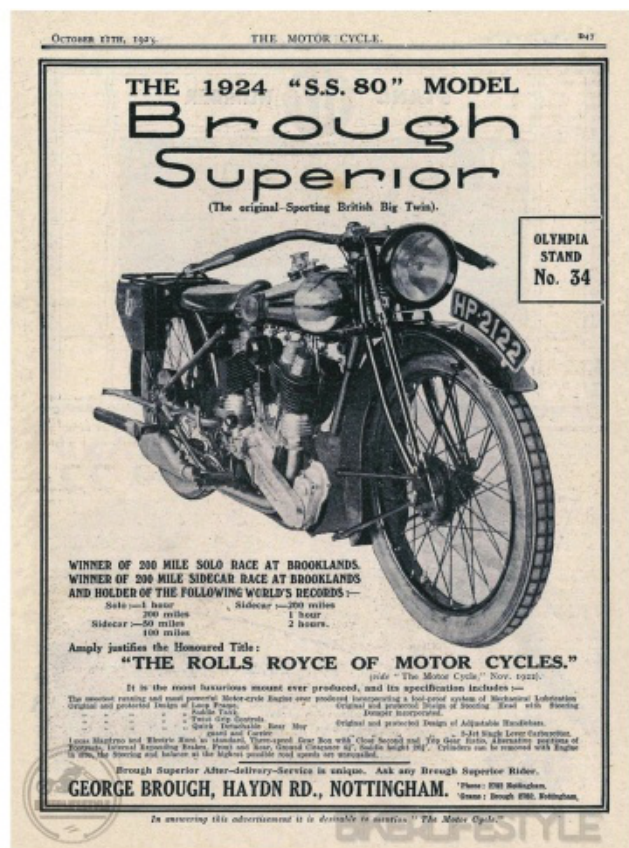
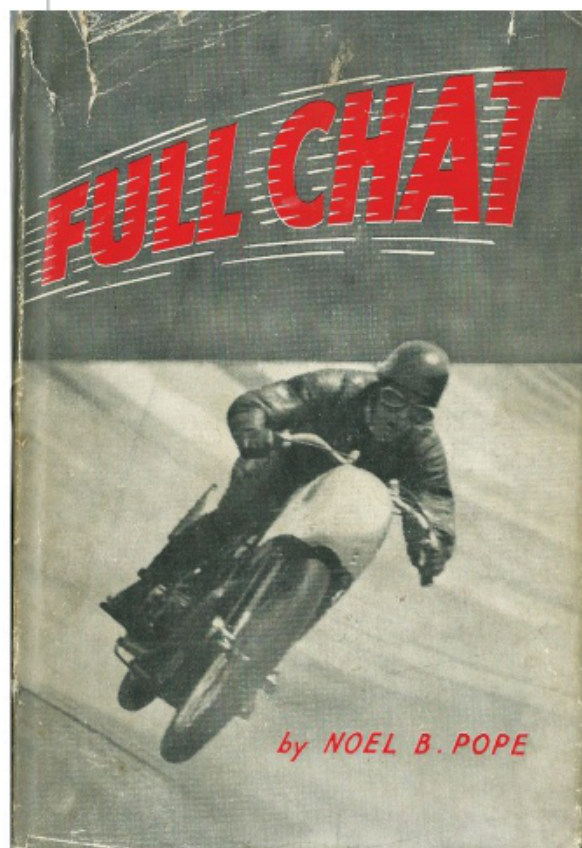
based on a winning combination of unrivalled performance, dazzling looks, competition success and clever marketing. Apart from the later 4-cylinder sidecar model with twin rear wheels powered by an Austin Seven car engine, and solitary abortive prototypes of the Dream four and a 500cc single, every Brough Superior ever constructed was a V-twin, predominantly powered by JAP engines. The lean build and record-breaking performance these embodied allowed Brough to knock the American marques like Harley and Indian, which owned the upper end of the British bike market in those days, off their perch. It also encouraged the eventual demise of homegrown rivals like Zenith, McEvoy, NUT and Montgomery. Broughs (the “Superior” bit became redundant after 1926, when W.E. Brough ceased making motorcycles) rapidly achieved unrivalled success in competition, excelling in every kind of race, sprint, trial and hill climb, on tarmac, sand, shale and even ice. At one extreme, in 1927, Dutch Brough owner Jan Sluymers actually climbed 9,613-foot-high Mount Merapi in

Indonesia, an extinct volcano, taking two days to complete the 18-mile climb — using bottom gear all the way!

### Breaking records

Brough Superiors repeatedly broke the official two-wheeled Land Speed Record, starting with Bert Le Vack at 119mph in 1924 (the feat prompted the astute George to swiftly market a “Le Vack Replica” for the street) and ending with Eric Femiough’s 169.786mph mark in 1937. This wrested the crown from BMW, after he’d been timed at a then incredible 175mph on a single earlier one-way run on his SS100-based machine.

George Brough himself even ranked unofficially as the world’s fastest rider at one stage, clocking 130.60mph in one direction at Arpaion in 1928, but melting a piston on the obligatory return run. However, George was an ultra-successful competitor in trials and sprints aboard his own famous SS80-based machine nicknamed “Old Bill” — perhaps in a backhanded salute to his father?



Noel Pope at the Brooklands bankings on a 1,000cc Brough on the cover of his autobiography (far left). A Brough advertisement from 1924 (left). A drawing of the JAP engine (above).



# Birthday Bike: Brough Superior SS100 Anniversary

To mark its centenary in 2019, Brough Superior is now manufacturing its limited edition Anniversary model unveiled at last year's EICMA Show, of which just 100 examples will be built costing — what else? — €100,000 each, including 20 percent French tax. So far the company has delivered 48 examples, with further orders coming in all the time, says Brough boss Thierry Henriette.

This birthday bike is essentially a seriously blinged-up version of Brough Superior's SS100 core model, whose DOHC 997cc 8-valve 88-degree V-twin engine is now Euro 4 compliant, and on the Anniversary features an array of four separate slash-cut tapered megaphone exhaust pipes. There's a vast selection of bolt-on items milled from solid alu-

minum billet fitted to the bike, and all made in-house at the Brough Superior factory, ranging from radiator trims to headlamp surrounds and assorted covers, to the fluted plates adorning the lower half of the distinctive 3.7-gallon fuel tank and sleek single seat. For there's still no space for a passenger yet on this or any other born-again Brough, although Henriette confirms that a two-seater Alpine Grand Sports will be the next new model to join the SS100, Pendine and now Anniversary models in the BS range. The Anniversary's ultra-distinctive five-spoke 18-inch wheels are machined up from aluminum forgings, with a 3.5-inch front and skinny 4.5-inch rear, shod with Michelin Pilot Road tires. The bling is such you'll need a tinted visor to ride

the bike in bright sunlight, as I did for half a day by visiting the Brough Superior Motorcycles factory in Toulouse (the French home of Airbus, many of whose suppliers also provide parts for Brough), where the entire motorcycle is built, engine included.

The liquid-cooled 997cc V-twin engine measuring 94mm x 71.8mm is a fully load-bearing chassis component, with a small titanium upper spaceframe bolted to the cylinder heads to locate the front suspension. Running 11:1 compression, this 8-valve power unit with composite chain/gear-driven dual overhead cams produces a claimed 102 horsepower at 9,600rpm, with 64 lb/ft of torque peaking at 7,300rpm. There isn't a huge amount of grunt low down, so you must use the six-speed gearbox to keep the V-twin engine revving, and the Anniversary motoring. But working the slick-shifting transmission is all part of the fun of riding the new Brough — and it is indeed a really enjoyable ride if you can forget for a moment what it costs!

Though it has an old-style cable throttle, so there's no choice of riding modes as would come with ride-by-wire, the low down mapping of the Synerject EFI is really excellent, with spot-on fueling delivering a smooth pickup from a closed throttle, and a linear power delivery as revs mount. Even with no balance shaft, vibration is minimal, presumably thanks to the cylinder angle chosen to permit a more compact installation in the frame, by saving 25mm across the top of the cylinders.

Most immediately eye-catching of the many distinctive features on any modern Brough Superior is the Anniversary's



Alan Cathcart  
aboard the  
Anniversary  
model SS100.

This became the first sidevalve motorcycle to lap Brooklands at over 100mph, and took him to victory in literally dozens of trials and races, as well as 51 of the 52 sprint races he competed in during the early 1920s. He might well have won the 52nd, too — except the front tire burst at 100mph close to the finish line of the Clipstone Drive strip. Though the bike crossed the finish line 2.2 seconds faster than the eventual winner, the time didn't count, because George was no longer in contact with it, but sliding across the tarmac alongside, busily removing skin from his forearms! As well, Brough Superiors repeatedly broke the outright motorcycle lap record at Brooklands, being the first to lap Britain's center of speed at over 120mph solo (Noel Pope, in 1935) and over 100mph with a sidecar (Freddie Dixon, in 1930), as well as setting the ultimate motorcycle lap record for all time of 124.51 mph (Pope again, in 1939). As well, Australian Alan Bruce broke the World Sidecar Speed Record in 1932 with his supercharged Brough, a fire-breathing outfit known as "Leaping Lena," which was claimed to be the first motorcycle ever to develop more than 100 horsepower.

All this success was reflected in healthy sales of Brough Superior road bikes, which from the very first adopted the wide, rounded saddle tank which became their trademark, nickel-plated (chromium, later on) but with the upper surface painted black, to avoid distracting reflection. Brough Superiors were arguably the first bikes to use today's saddle-type fuel tanks, an innovation matched by the fitment of the patented easy on/off centerstand introduced in 1926, at a time when other manufacturers used rear stands held in place by a mudguard clip.

The more sporting Mark I model which launched the new marque used a heavily oversquare overhead valve JAP engine of nowadays modern 90mm x 77.5mm oversquare dimensions. At a time when transmission belts prone to slip in rain or break were still widely used in Britain, the "Brufsup" used chains. The Mark II launched alongside it was more quiet and refined, using a Swiss MAG engine with enclosed rocker gear and pushrods — but like almost all Brough Superior's bought-in engines, these were modified in detail to George's exacting requirements.





front suspension, which combines a retro appearance with ultra-modern design. It's based on the wishbone fork system created and raced to points-scoring finishes in the 1979 FIM Endurance series by French engineer Claude Fior — some two years before the first bike bearing the similar Hossack design was created — then with his own Marlboro-sponsored 4-cylinder bike in 1978/79 500GP racing. There's a constant reminder that you're riding something completely different in terms of front suspension by the way the wishbone fork links rise and fall in front of you, as the fully adjustable Kayaba shock operated by the Fior fork eats up road

rash. Despite its rangy 60.2-inch wheelbase, the Anniversary changes direction pretty well, without any undue effort needed to prise it away from its sure-footed line in a turn. It's a confidence-inspiring ride, and everything seems well controlled, with good ride quality.

The Brough Superior's brakes are equally leading edge, with four Beringer 9-inch aluminum-ceramic composite floating front discs, doubled up in two pairs, each gripped by four-piston radial calipers employing special sintered metal pads to stop a bike weighing 409 pounds dry with a balanced 50/50 weight distribution. They work well, and

aren't at all snatchy, so this many discs isn't overkill, and the reduced rotating mass helps sharpen the steering as well as aid in appearance. For this appears at a quick glance to be a girder-forked drum-braked salute to all our motorcycling yesterdays — only it's not. Quite the opposite, in fact ... Thierry Henriette and his team have produced a centenary celebration of a bike whose considerable visual presence is matched by its overall capability, and the undoubted enjoyment you get from riding it if all the zeros on that price tag aren't dominating your subconscious. Happy birthday, Brough Superior! — *Alan Cathcart*

## The SS

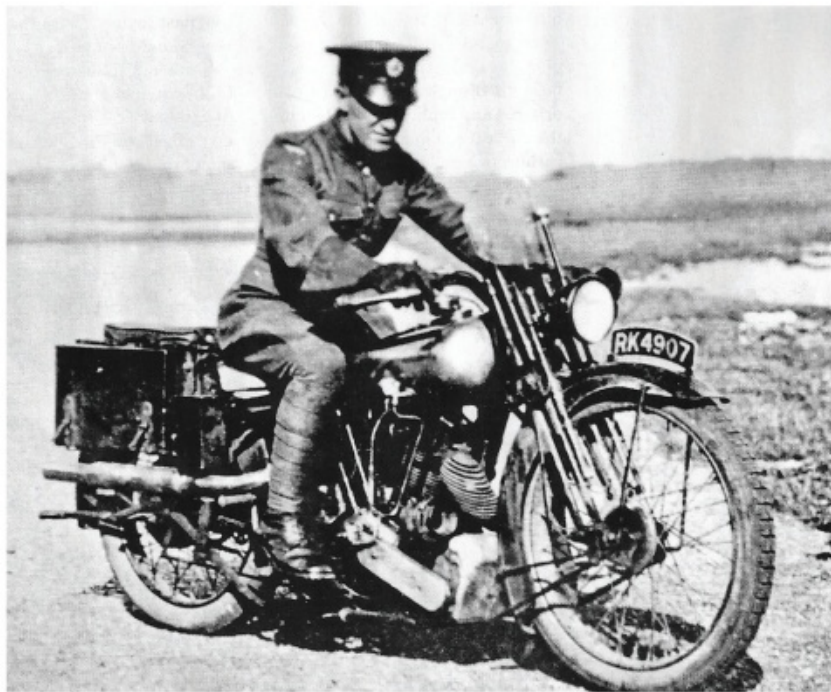
It was with the debut of the "SS" model prefix indelibly associated with the marque that Brough Superior sales really took off. The launch of the 1,000cc JAP-engined sidevalve SS80 at the 1923 Olympia Show was followed a year later by the even faster, more sumptuous and exclusive OHV SS100. Both used cradle frames that fitted snugly around the muscular engine. The numbers referred to the warranted top speeds of the bikes. From 1925 on, each SS100 road bike was supplied with a written guarantee that it had been timed at 100mph or better over the flying quarter mile before delivery.

Broughs were fitted with progressively more developed versions of the JAP engines — latterly the magnificent JTOR OHV engine employed from 1928 onwards on the SS100, which delivered a genuine 50 horsepower in street guise — and with various updates which included the switch to quieter, smoother-running Matchless V-twin engines for the SS100 in 1936. The SS80 and SS100 formed the backbone of the Brough Superior range for most of the company's 21-year life span, during which just 3,048

examples of various types were made before the company ceased production in 1940 with the advent of war. This included the most highly tuned SS100 variant, the Pendine (essentially a racer with lights that, even in those days, was only marginally street-worthy once fitted with fishtail mufflers) and the Alpine Grand Sports, the ultimate street version so named to commemorate George Brough's personal success with the prototype in the gruelling eight-day Alpine Trial. Equipped with a homegrown copy of Harley-Davidson's benchmark girder forks, developed by George and his engineer friend Harold "Oily" Karslake and marketed under the Castle name, Broughs set new standards for superior handling as well as superlative performance, latterly also with the option of rear suspension. This came first with the Draper cantilever shocks later copied by Vincent, then via plunger springing of Brough's own design, which was standardised across the range in 1938. Brough was also quick to fit a positive-stop foot gearchange, after Velocette introduced the idea, from 1931 on.

Except for a handful of "poor man's Broughs" — models like the 6/80 sidevalve or the even rarer 500cc V-twin, whose





T.E. Lawrence on one of his seven Broughs (left). A 1936 Brough Superior automobile (right). The SS80 (bottom).

production in each case barely reached double figures — Broughs were all built big, and as such they became the motorcycle of choice for cognoscenti of speed. These included an Eastern ruler, who insisted his bike be silver-plated all over, not only the fuel tank; European nobility, like Austria's Archduke Wilhelm Franz of Habsburg, who raced his Brough successfully and won the Baden Grand Prix on it; and legendary figures such as T.E. Lawrence ("of Arabia"), who owned seven Broughs in a row, and sadly died after an accident on one in 1935, through no apparent fault of his own or the bike's. Lawrence was also a mileage junkie, and would think nothing of leaving Brough's Haydn Road works in Nottingham on a Friday night aboard his SS100, and returning on Monday morning with the back tire worn down to the canvas and 1,000 extra miles on the clock.

Brough factory manager Ike Webb, an ex-Grenadier guardsman who was George's right-hand man from first Brufsup to last, notched up more than 175,000 miles on the bike he built for himself, using nothing but reject parts which on inspection had failed to meet Brough's rigorous standards for customer bikes. Brough Superiors may largely have been assembled using parts from outside suppliers, but the workforce numbering just 19 men by the time the last machine was built in July 1940, after the outbreak of

war, worked to the most demanding level of tolerances. But then the Brough works was turned over to the war effort, employing over 330 people at its peak, the majority engaged in machining crankshafts and other high-precision parts for the Rolls-Royce Merlin aero engine built in nearby Derby, which powered the Spitfire fighter. How ironic that the "Rolls-Royce of Motorcycles" actually ended up building engine components for R-R itself ...

After the war, George Brough investigated resuming motorcycle production, but a shortage of suitable engines — which in any case were only available at prohibitive prices — made him drop the idea, along with the plan to resume manufacture of the Brough Superior luxury car range. The cars had been built from 1935 onwards with either American straight-six or straight-eight Hudson engines, or the V-12 Lincoln. Nevertheless, the company continued to flourish postwar, making precision industrial parts for a wide range of applications, with George Brough at its helm until he passed away in 1970. The Brough name lives on today, having been reborn via Austrian-based British entrepreneur Mark Upham, who's now ceded the manufacturing rights to his French colleague Thierry Henriette, proprietor of Brough Superior Motorcycles which produces the modern SS100 range of 88-degree V-twin models in its Toulouse factory. **MC**





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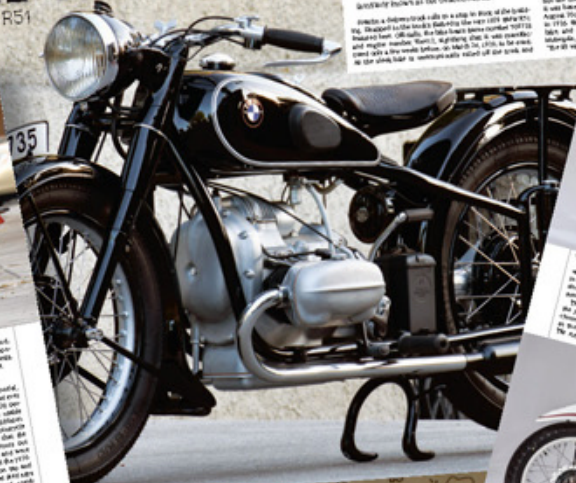
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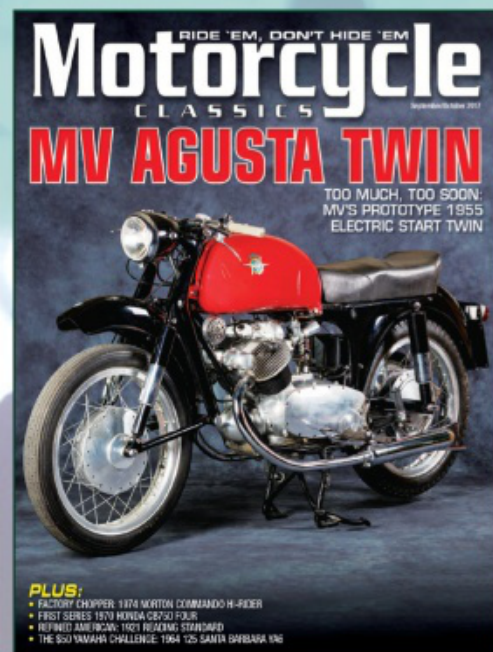
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The Monocoque Commando, designed by innovative Norton engineer Peter Williams.







# THE APPROACHABLE NORTONS

Norton's release of a new  
“all-British V4” has us sifting  
through the sands of time

Story by Hamish Cooper    Photos by Phil Aynsley

Norton's tie-up with respected U.K. automotive engineering firm Ricardo has resulted in an all-new V4 engine. It's the first clean-sheet 4-stroke performance model the famous company has made since the 1970s. Computer-designed and painstakingly developed, it is Norton's new platform off which several models will spin.

This isn't the first time a motorcycle manufacturer has joined forces with the car industry. Harley-Davidson did it twice with Porsche. The first time, in the 1980s, was the still-born “Nova” V4 engine. Their second union conceived the Revolution engine range, which powered the liquid-cooled V-Rod family launched in 2002.

However, Norton only needs to look back into its own history to read a cautionary tale. In the early 1970s it worked with Cosworth on what it hoped would be a world-beater, the so-called Norton Challenge P86. Sadly, this was a dead-end and the project was soon abandoned.

Long forgotten, it unexpectedly reappeared in the mid-1980s to win a major international race at Daytona's speed bowl. The original Challenge project was planned to become the basis of a range of models and the current Norton V4 engine has already achieved this aim. As well as the V4 SS, Norton has revealed three 650cc parallel-twin models based on the V4 engine: the Superlight road racer, and the Nomad and Ranger retro street scramblers. All these bring back memories of Norton golden years of the 1970s. Hang on for a wild ride back in time.

## Monocoque Commando

The sales success of Norton's 1968 Commando was underpinned by its racing efforts. Just a year after production started, the Commando was up on the podium at major events in the U.S. and U.K. Often forgotten in the hype of Triumph's legendary 1969 Isle of Man TT Production win at 99.99mph is that Norton rider Paul Smart finished second at 99.37mph.

Cross-pollination of U.S. and U.K. racers helped develop the free-form Formula 750 racing class. This inspired Norton racer/design engineer Peter Williams to modify a Commando frame for the first event in 1971. He quickly followed this with what he called a “mini-Commando” with aerodynamics and pannier fuel tanks the main features. Superstar racer Phil Read took one to fourth at Daytona's 200 meeting, showing a potential that Williams fully exploited with the monocoque of 1973. It was the most successful racing Commando Williams built. Advanced aerodynamics helped gain speed from an aging engine design, while fuel and oil were carried low in the frame to ensure high-speed stability.



The Monocoque Commando. Fuel and oil are contained in the large frame (below).



Standing not much taller than its creator's knees, it easily hit 160mph on Daytona's speed bowl. Monocoque chassis were first seen in early 1960s open-wheeler race cars.

Spanish motorcycle factory OSSA developed a monocoque-framed racer that famously finished third in the 1969 250cc World GP championship. So Williams wasn't the first to build one, but his differed from the OSSA's magnesium monocoque by using thin-gauge stainless-steel sheets.

Magnesium wheels and fork components helped keep dry weight to just 330 pounds. The engine gained reliability with an outrigger bearing supporting the gearbox mainshaft and the primary drive sped up to reduce torque loadings.

The bike's overall low profile was helped by having the fuel and oil contained in the large frame enclosing the engine. To save weight, crucial with an engine producing less than 80 horsepower, and to simplify the electrics, fuel was pumped up to the carburetors via the action of the swing-arm. An oil cooler was fitted in the front fairing.

Although blighted by carburetion issues at Daytona in 1973, Williams bounced back to win the Anglo-American Easter series on points. He then won the gruelling Formula 750 race at the

Isle of Man TT with a new lap record of 107.2mph. Teammate Mick Grant finished second.

Other wins and podiums followed, including second to Giacomo Agostini and his MV, the world's most sophisticated GP 4-stroke, at Mallory Park's Race of the Year. Williams is now making replicas of his famous monocoque and is still



disappointed his groundbreaking design was shelved.

### Spaceframe Commando

Just why a winning formula would be changed so radically after just one season is shrouded in the mists of time. The monocoque frame could be easily lifted off the engine but the actual construction

of the chassis was very time consuming. Also, being built to Williams' exact physical dimensions and preferences, it didn't suit every rider.

At first glance the space-frame Commando looked very similar to the monocoque but with a small conventional fuel tank above the engine and a secondary tank high in the tailpiece.

The oil tank was mounted low in front of the engine, meaning an oil cooler wasn't needed. Features like this, and the lighter, short, straight frame tubing, helped lower dry weight compared to the monocoque. Two engines were used: the new, short-stroke 750 and the torquey 828cc now powering Commando's 850 range.

Using the "850" 77mm bore on a one-piece crankshaft with 80mm stroke (both 850/750 standard stroke was 89mm) with more modern valve angles promised peak performance at over 8,000rpm. The reality was the crankcases couldn't take the pressure for long, so rev limits were dropped back to around that of the existing 750cc race engine.

Race results were disappointing that year, with one bright spot coming early in the season when Williams and Dave Croxford finished one-two at the Brands Hatch Hutchinson 100.

With the promise of the new, water-





The Spaceframe Commando. The oil tank is mounted low at the front of the engine (below).

cooled Cosworth Challenge ahead, the team pressed on, even testing a space-frame with monoshock rear suspension.

In August 1974, one of Norton's darkest days occurred when Williams crashed after the one-piece tank/seat unit dislodged. His injuries ended his racing career and coincided with withdrawal of the team's main sponsor, cigarette brand John Player.

The air-cooled twin was finally obsolete but there was one chapter left to play out.

### Cosworth Challenge

As early as 1973, Norton was building a successor to the Commando. Without the financial resources to develop its own engine lateral thinking had drawn it to Cosworth.

Why not hack two cylinders off the V8 engine that had been dominating the F1 Grand Prix scene since 1966? Ford had funded Cosworth co-founder Keith Duckworth's innovative engine. This double-overhead cam design featured fuel injection and an industry-leading flat-top piston layout with shallow combustion chambers and four valves per cylinder.

Peter Williams had no involvement with the Challenge (but much later ended up working for Cosworth on its F1 car engines). It was driven by Dennis Poore,

chairman of the Norton Villiers Triumph group, who envisaged it both as a race and road engine. Being a former car racer, Poore found it easy to strike up a relationship with Duckworth.

Based on the best features of the F1 3-liter V8, the resulting 750cc parallel-twin had a modern bore and stroke ratio of 85.7mm and 64.8mm with potential



peak power of around 120 horsepower at 10,500rpm. But it was heavy and compromises forced between design and production gave it a unique Achilles' heel.

This was a harmonic frequency so strong it would self-destruct if held at 4,000rpm for more than a few seconds. In a racing situation this wasn't an issue as the engine ran between 7,000rpm and

10,500rpm. However, 4,000rpm was a typical road cruising speed that could be lethal for both owner and manufacturer if put into production.

More built-in design flaws came with the automotive-based format, not the least of which was a peaky, car-like power delivery totally inappropriate for a motorcycle. Also, the crankshaft didn't have adequate main bearing support.

It's easy to make a car engine's flywheel an integral component located between the crankshaft and clutch (with ring-gear attached for a starter motor). Much less so on a parallel-twin engine, especially when Norton specified it had to have an old-fashioned 360-degree crankshaft throw. So the flywheel sat between the connecting rods, where a crucial third main bearing should have been.

The list of flaws extended to the downdraft inlet ports. Their wide internal diameters were perfect for the high-pressure delivery of fuel injection, but Norton demanded carburetors. Also, a long rubber-toothed belt replaced the car engine's train of gears. The result was a tendency for the belt to jump, sending the engine's cam timing haywire.

Cosworth claimed the water-cooled twin made 95 horsepower at 9,750rpm using 40mm Amal Mk II carburetors, and





The Cosworth Challenge. Major chassis components hung off the engine (below).

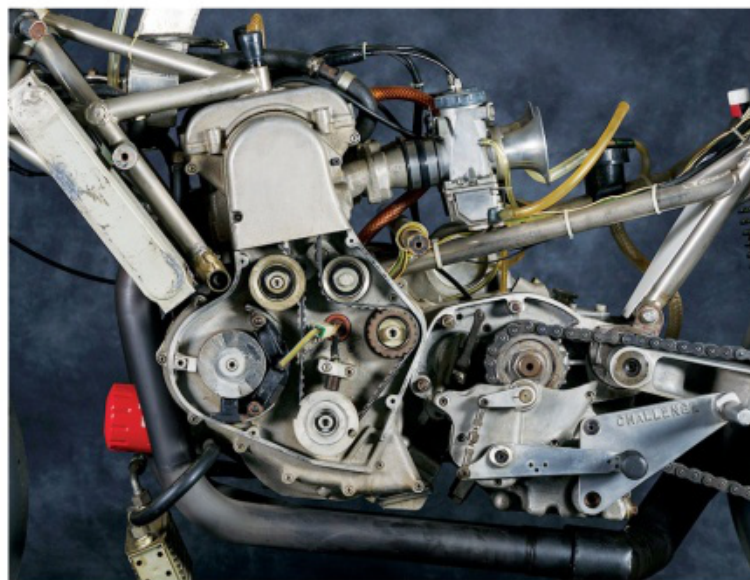
just over 100 horsepower at 10,500rpm running experimental fuel injection.

The engine weighed 194 pounds, of which about 66 pounds was just internal reciprocating mass such as the flywheel and balance shafts. By contrast, a Commando engine, minus carbs, primary drive and gearbox, weighs around 77 pounds.

But several significant features were at least a decade ahead of even Grand Prix motorcycle technology. Major chassis components were hung off the engine supported by small subframes. The swingarm pivoted through mounts cast into the gearbox housing. The rear brake disc was off-board of the swingarm, so wheel and sprocket could be quickly changed. A lot of this clever thinking eventually found its way into the mainstream and can be seen today in MotoGP and Superbike technology.

Much media speculation surrounded lone Norton racer Dave Croxford as he brought the Challenge out for the first time at Brands Hatch in October 1975. The short-circuit veteran only made it

to the first corner when a 10-bike pileup ended Norton's dream. Croxford wasn't seen again on the Challenge until the first round of the popular Transatlantic Trophy spectacular in 1976. Totally outclassed, it was withdrawn. It made brief appearances



at various meetings, including the Imola 200, but never figured in race results. However, the Challenge always put on a show. It looked purposeful, sounded quick-revving and had an exhaust note much like current MotoGP machinery.

### Fitting finale

This disastrous story does have a happy ending — in the U.S. In 1984, Cosworth's new director, racing enthusiast Bob Graves, spotted forgotten Challenge engines in the factory. "You're looking at the only engine we have ever built which has never won a race," Keith Duckworth is claimed to have told him. Cashed-up Graves started building a better version with fuel injection and capacity increased to 820cc. Named the Quantal, it involved John Surtees and a network of GP-level technicians. In 1986 GP racer Paul Lewis took the Quantal to second behind Marco Lucchinelli's air-cooled factory F1 Ducati at Daytona's Battle of the Twins.

Graves returned with Roger Marshall in 1988 for a truly astounding victory the year after Lucchinelli had won again, this time on a prototype 851. Marshall beat Stephano Caracchi and Ducati's production water-cooled, DOHC, 8-valve Superbike.

Finally, a British-designed-and-built, water-cooled, DOHC, 8-valver was a world-beater. **MC**



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Riders gathered for a photo near the Oakland B&O Railroad Museum in Oakland, Md., just visible in the background.

# GETAWAY 2019

## 4th Annual Ride 'Em, Don't Hide 'Em Getaway

Story by Landon Hall

Photos by Richard Backus, Karl Jarvis & Melissa Geiken

**W**ay back in August 2016, we invited readers to join us at Seven Springs Mountain Resort in Pennsylvania for the very first Ride 'Em, Don't Hide 'Em Getaway. More than 80 readers showed up that first year, and we're thrilled that you keep coming back every year since. Our 4th Annual Getaway was Aug. 9-11, 2019, and like the first three it was another wonderful weekend of riding, wrenching and bench racing, along with tasty meals shared together. With 70 riders on classic Moto Morinis, Yamahas, Nortons, BMWs, Triumphs, Laverdas, Hondas, Suzukis and more — not to mention a trio of brand-new Royal Enfield twins — enjoying the great twisty lanes and back roads of Pennsylvania's Laurel Highlands. While our venue at Seven Springs moved from indoors at our beloved Festival Hall (now remodeled and too nice for drippy, oily motorcycles) to up the hill at The Foggy Goggle, we soldiered on. Despite not as much space for inside

parking, the large covered patio played home to most of the bikes during our time at the resort. We did manage to sneak a few inside the bar which made for some fun photos.

Friends Tom McKee and Adam Rexroad planned our routes. Saturday's 125-mile ride took us south to the quaint downtown of Oakland, Maryland. Riders relaxed, wandered downtown, took in the museums and had lunch at a variety of locally owned restaurants. Thanks to Tom and Adam for the killer route, and to the Alder Street Diner for the best burger I've had in years!

Saturday night's banquet featured this year's special guest, motorcycle journalist Dain Gingerelli. Dain kept us in stitches, sharing stories with Richard Backus and our group of riders from his many decades spent riding, writing and racing. On Sunday morning we were on the road again, making a 60-mile loop through Ohiopyle State Park, then back to Seven Springs.

Special thanks to sponsors Bonhams, Spectro Oils, RetroTours and Pecard Leather Care for helping making it all happen. Watch for details on our next MC event at Seven Springs, the expanded Gearhead Gathering, Sept. 5-6, 2020! **MC**





Clockwise from left: Joel Sammick (middle) aboard his 1972 Laverda SF, prepares for departure; beautiful, scenic, curvy roads were the highlight of the Saturday ride; founding editor Richard Backus (right) joined us for the weekend aboard his Laverda RGS 1000. He was also kind enough to lead Saturday night's discussion with special guest Dain Gingerelli (middle).



Riders park their bikes and settle in before Friday night's dinner (left); Craig Mallory (left) and Ben Walker from Bonhams joined us for the weekend's events and rides, putting miles on the RetroTours Norton Commando Fastback and Moto Morini 500.





All manner of classic and modern bikes lined up in front of The Foggy Goggle, our weekend clubhouse at Seven Springs.



Left to right: Dain Gingerelli and the RetroTours Yamaha TX750; we made space inside the bar for parking a few bikes!



Left to right: The 1920 Baldwin steam locomotive outside the B&O Museum in Oakland; another terrific road on Saturday.





A 1956 Zündapp Bella at the Garrett County Transportation museum.



Left to right: The hills are alive with the sound of motorcycles; a trio of fabulously faired bikes from Ducati, BMW and Honda.



Eric Kurth was the recipient of our yearly Hagerty Motorcycle Insurance Best of Seven Springs Award for his recently revived 1974 Triumph Trident (left). Paul Harrison and his Moto Guzzi V7 (left) and Ben Walker at a fuel stop (above).



# THE VINCENT THAT NEVER WAS

Tony Cording  
builds a  
Comet SS

Story and photos by Robert Smith

Although best known for its thundering V-twins, Vincent always included a 500cc single in its model range. That is, until the Series D models of 1955.

Vincent showed two prototypes of a Series D single — the fully enclosed Victor and a naked Comet — but neither went into production. Series D enthusiast Tony Cording decided he would build his own. First, though, a little history.

In the decade after World War II, Vincent's position as builder of the world's fastest street bike was threatened by ever-quicker and more powerful parallel twins. First BSA then Triumph established record speeds of over 150mph on the salt. The Rapide's 45 horsepower and the Shadow's 55 horsepower were impressive — as was their unmatched torque — but by 1955, a street Tiger 110 was making 40 horsepower and BSA's Super Flash claimed 42 horsepower, with more to come. Vincent's rear suspension was no longer unique with the almost universal adoption of swinging fork style suspension.



While the quality of design and build of the Vincent was unparalleled, the competition was improving all the time.

Sales of Vincent motorcycles declined in the early 1950s, and after a failed government contract for the Picador drone aircraft engine, Vincent ran into financial difficulties. After restructuring his company in 1953, Philip Vincent decided to take his product line in a different direction.

## Blame the Italians!

By the mid-1950s, scooter sales were beginning to outpace motorcycles in the U.K. From a negligible number in 1950, motorcycle imports grew to around 60,000 a year in 1955 — or a third of

U.K. motorcycle production. Most of the imports were scooters from Italy, Germany and Eastern Europe, sold on the idea that they were cleaner and more modern because of their streamlined bodywork.

Seeing the trend, but committed as they were to big-wheel, full-size motorcycles, many British manufacturers decided that the answer was to enclose their motorcycles with body panels. Triumph had the Bathtub, Norton the Dominator Deluxe, Velocette the Special and Veeline models. British makers also designed brand-new motorcycles around the concept, like the Ariel Leader and Velocette Vogue. Or they just wrapped fiberglass panels around





utility machines intending to disguise the fact that underneath was the same old commuter bike. Some, like BSA/Triumph (Sunbeam/Tigress), Velocette (Viceroy), DMW (Deemster) produced their own scooters. However, they somehow always seemed clunky and awkward compared with the sleek and chic Vespa and Lambretta. BSA and Velocette apart, most were built around the ubiquitous but aging Villiers 2-stroke engine. Seeing the writing on the wall, Douglas threw in the towel early and contracted with Piaggio to build Vespas in England.

Where many of the British builders went wrong was in assuming that the traditional sporting motorcyclist — responsible for the bulk of full-size bike

sales — wanted his 500 single or 650 twin covered up. That proved not to be the case. Most buyers of bathtub Triumphs ditched the body panels — which accounts for their scarcity today.

### The Vincent Series D

As always, though, Philip Vincent went his own way. Where his motorcycles excelled was in long-distance, high-speed touring. To capitalize on this, and to introduce a new and unprecedented level of rider and passenger comfort, Vincent embraced the idea of a fully enclosed motorcycle. Effectively he was going after what we would now call the sport-touring market. But in the mid-Fifties, this market barely existed,

and didn't really develop until the BMW R100RS of 1976. Vincent was around 20 years too early.

### Black Knight and Black Prince

Philip Vincent's aim was to provide the discerning rider with a high-speed tourer: "a two-wheeled Bentley," as he reportedly described it. To achieve his aim, the Vincent Rapide and Shadow twins (and by implication, the 500cc singles) underwent some significant changes for the new "D" series of 1954.

Mechanically, the engines and transmissions stayed pretty much the same, though reports imply that the factory's practice of selecting components, especially cams, to optimize the performance





## VINCENT COMET SS

**Engine:** 636cc air-cooled OHV 4-stroke single, 90mm x 100mm bore and stroke, 10:1 compression ratio, 45hp (calculated)

**Top speed:** 115mph (est.)

**Carburetion:** 36mm Mikuni

**Transmission:** 4-speed Norton gearbox, chain final drive

**Electrics:** 12v generator, BT-H electronic magneto

**Frame/wheelbase:** 1-inch-diameter steel tube backbone w/engine as a stressed member

**Suspension:** Vincent Girdraulic front, Vincent swing fork, single spring/damper unit rear

**Brakes:** Three 7in (178mm) SLS drums, two front, one rear

**Tires:** 100/90 x 19in front, 110/90 x 18in rear

**Weight:** 375lb (170kg)

**Seat height:** 31in (787mm)

**Fuel capacity/MPG:** 5gal (18.9ltr)/50-60mpg



The steering head is from a Series D, and the forks are the same Girdraulic setup as a Series C (above).

### “Any color ...”

The series D Black Prince with the Shadow engine, and Black Knight, based on the Rapide, were fully enclosed in black-enameled fiberglass bodywork in three sections: the rear section encircled the bike from the gas tank back and around the back wheel; the front section acted as an air scoop to maintain engine cooling and also incorporated leg shields; and the headlight fairing included the front fender and a large windshield. Black was the only color available.

Vincent struggled to find a supply of fiberglass body panels in sufficient

of production engines, was abandoned. The engine was fueled by the new, more compact Amal Monobloc carburetors, which allowed the fitting of two “front” cylinder heads with the carburetors on the left, as on the Black Lightning. Electrics were now by Lucas, not Miller as on previous Vincents, with a DC generator, and battery/coil ignition replacing the magneto.

The drivetrain was mated to a new chassis: a 1-inch-diameter steel tube replaced the series B/C “UFM” box section upper frame member (which doubled as the oil tank) connecting the rear suspension to the steering head. A new, separate oil tank was mounted on the rear subframe. The rear suspension was also modified to use a single Armstrong spring/damper unit in place of spring boxes and a friction damper. The seat was now fully sprung, unlike the C series seat which was attached to the rear “swingarm” and therefore articulated.

A novel feature was the centerstand, which was deployed by a hand lever on the bike’s left side. The Shadow’s iconic 5-inch Smiths speedometer was deleted, replaced by a 3-inch unit in the headlight. The tough-to-find 20-inch wheels/tires were dropped, replaced by 3.5 x 19-inch front and 4 x 18-inch rear, and the “Tommy bar” wheel spindles were abandoned in favor of regular hex nuts.







quantity and to their demanding quality standards. In order to maintain a supply of motorcycles, Black Prince and Black Knight models were built and sold without the bodywork, with the names reverting to Rapide and Black Shadow. In all, just around 450 Series D twins were sold, with as many as half being the naked versions. On the Series D, the crankcases were bare on both the Shadow and the Rapide, rather than the fully enameled Black Shadow Series C engine. However, the timing cover and the clutch cover were black on both D models.

But what about the series D singles? Just one fully enclosed Victor was built as a prototype. It consisted of the familiar Vincent 500cc single with a Burman gearbox, and it was fitted with Series D chassis and ancillaries. The bodywork was the same as the Knight/Prince. Just one naked D single was made, again using the D frame spec. Its fate is unknown, at least with any level of certainty.

### **Tony Cording's Series D "Comet SS" Special**

Tony Cording's passion for Series D Vincents earned him the title "The D Man" within the Vincent community.

But his introduction to Vincents in general and the Series D in particular came about by accident.

"I was a lover of Vincents from the age of 16, but I was not able to realize my dream of owning a V-twin Vincent until 1975."

That was the year Cording attended a Vincent Section meeting in Toronto, Canada, and met a man named Barry Norton, who was heard saying, "My Vincent. I'm getting rid of it." Cording inquired if he was serious: "He said,

'Yes, I am,' and I said, 'I'll buy it.' I have a picture of me the next day picking up the bike with the registration, but I didn't know it was a Series D. To me it was just a Vincent."

With input from other Vincent owners, Cording soon noticed the significant variances between his Series D Rapide and the earlier Series B and C. "Completely different motorcycles but with the same engine," he says.

"The Series D was not well received by Vincent owners. To this day, the average



The cool Lucas battery box (left). The 636cc single is fed by a 36mm Mikuni carb.



Tony Cording and his one-of-a-kind, hand-built Vincent Comet SS.



shipped back to Canada and John McDougall and I discussed what we would do with the engine."

"Ultimately we said, 'Well, if we're going to have a single we should make it as big as we can.' We decided to make it into a 636cc because that was the biggest crankcase mouth opening for an over-sized piston."

Both bore and stroke were enlarged giving 90mm x 100mm instead of the stock 84mm x 90mm. McDougall specified the piston for a 10:1 compression ratio, with a squish-band matched to the cylinder head, then gas-flowed the ports. Carburetion was by a 36mm Mikuni with a BT-H electronic magnet providing sparks.

Cording bought the billet cylinder and oversize liner from Maughans in England ([maughanandsons.co.uk](http://maughanandsons.co.uk)), and sourced a suitable squish-band piston from Arias ([arias Pistons.com](http://arias Pistons.com)). The engine was mated to a Norton clutch and gearbox.

"That was when I said, 'I'm a Series D man; why don't we make it into a Series D Comet Super Sport?' And that's what we did. Philosophically, to

Vincent owner will take a Series C over a Series D any day of the week. However, I fell in love with the Series D. One year later I bought a Series D Black Shadow and two years later I bought a Series D Black Prince. So I became the Series D guy."

Series D models are less common than C's, though, Cording says. "There were 8,327 series C's built and only 452 series D's. My first exposure to a Series C was when I bought a basket case Comet."

With help from Vincent guru John McDougall (now deceased) and ace machinist Dan Smith, Cording assembled a replica Grey Flash race bike which he ran at the now defunct Westwood race circuit outside Vancouver, B.C. He found the experience of riding a C very different. "On a Series D you cannot feel the rear wheel going up and down, but on a Series C you can, because of the articulated suspension affecting the seat."

After selling the Flash, Cording immediately regretted his decision. "It was a very fast single and I thought how nice it would've been to have converted that Grey Flash to a street

machine," Tony says. "I was in England with my friend Jack Marshall — he's the guy that introduced me to Vincents in 1956 — and bemoaning my misfortune at having unwisely sold the Comet. He said, 'Come out the back,' and he gave me the crankcases, flywheels, and rear swingarm from a Series C and said, 'These are for you.' So I had them





"There is a lot of genuine Series D stuff in this bike."

my mind, this could have been the ultimate Vincent single." The next challenge was building the chassis. Cording was able to find most of the D chassis components and/or modify them to suit. Using the same Girdraulic fork as the C, Cording also located the correct series D steering head and swingarm, and 5-gallon (U.S.) tank. (The series C tank was 3.75 Imperial/4.5 U.S.) Black Shadow brake drums were fitted up front with Rapide drums at the rear attached to alloy wheel rims. A fully suspended Series D seat was fitted. "There's a lot of genuine Series D stuff in this bike," Cording says.

Cording is also baffled as to why Vincent didn't make a similar bike themselves:

"Of the 8,327 Series C's produced, 3,951 were Comets," he says. "So the potential for Vincent to make a large, Gold Star-ish street machine of an

enlarged capacity was there. But the only big singles around were Panthers, and (Norton) Big Fours and stuff like that."

What is it like on the road?

"It is quick. It's excellent to ride. It rides just like a Series D. Comfortable as heck. John (McDougall) calculated with compression ratio and gearing that it would do 115 miles an hour. I've never gone up to that kind of speed and never likely to, but that was John's calculation.

"I took it to Texas last year for the North American Vincent rally and rode the 350 miles between Austin and Alpine, Texas, no problem at all. Good fuel consumption. Easy to start. So it's a nice machine," John says.

Really? Starting a 636cc single with high compression is easy?

"I've got to be honest with you, I had to relearn the starting procedure because I tried to start it the same

way as I would a twin. It's got a valve-decompressor, of course." And applying the correct technique, "It's no problem to start," he says.

What's Cording's opinion of his finished Comet Super Sport?

"It was a continuation of a love affair with the Series D. The open D, to me, with its new suspension, modern ignition, and more modern electrics, was a cut above the Series C. But it was never seen as being that way."

What about the much-maligned bodywork on the Series D twins?

"The enclosed D is a love-it-or-hate-it machine. The Black Prince was my number one Vincent ride for 25 years. I went everywhere, and was known as The D Man. I always enjoyed the 'slings and arrows.' Funny enough, when I sold the Prince, which was the last of my D's, and bought a Series C Rapide, I really missed that fairing." **MC**



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# MATCHLESS GERMAN

## 1952 Horex Regina 350 road test

Story by Alan Cathcart  
Photos by Kel Edge

**H**orex was Germany's leading manufacturer for almost 50 years either side of World War II, and was in many ways comparable to Britain's older Matchless marque in terms of product and marketplace positioning, as well as in its road racing involvement.

But curiously, the company is little known outside Germany, despite its products being exported to as many as 65 different countries during the 1950s (though not including the U.K.). That's despite its wide range of models having an undeniably British air about them in terms of design, and even styling.

### Horex beginnings

Located in Bad Homburg, north of Frankfurt, Horex was founded in 1923 by Fritz Kleeman, 22, whose father Friedrich owned the Rex glassware company, a manufacturer of preservative jars based there, and was also the main shareholder in the nearby engine manufacturer Motorenfabrik Oberursel. This firm had formerly supplied engines to power the Fokker fighter aircraft used by Germany's air squadrons in World War I, including the famous Dr.I triplane in which the "Red Baron" Manfred von Richthofen gained his final 19 victories out of a total of 80, and in which he was killed on April 21, 1918. Postwar, Oberursel developed a range of proprietary engines under the Columbus name, and Fritz Kleeman, an aspiring motorcycle racer, built a bike using a 250cc OHV Columbus engine with a 3-speed hand-change gearbox and a tubular steel frame made by the Stein company. To name it, he conflated Homburg and Rex to create the Horex brand name, and put the result into production to help satisfy the growing demand for personal transportation in postwar Germany.

The model's sales success was such that, in 1925 Horex and Columbus merged, and the joint company went on to develop a best-selling range of OHV and sidevalve singles from 250cc up to 600cc. In the 1930s Horex's gifted designer Hermann Reeb produced a series of innovative designs which powered the marque to the top of the German sales charts, with a full model range running all the way from the 63cc Ghom 2-stroke clip-on motor for bicycles, through 198cc, 298cc, 346cc, 498cc and 598cc





## 1952 HOREX REGINA 350

**Engine:** 342cc air-cooled OHV 4-stroke single, 69mm x 91.5 mm bore and stroke, 6.8:1 compression ratio, 19hp at 6,250rpm

**Top speed:** 78mph (claimed)

**Carburetion:** 26mm Bing 2/26/23

**Transmission:** 4-speed, enclosed chain final drive

**Ignition:** 6v, coil and breaker points ignition

**Frame/wheelbase:** Single downtube open-cradle frame with engine as semi-stressed member/53.7in (1,365mm)

**Suspension:** Oil-damped 35mm Horex telescopic fork front, plunger rear

**Brakes:** 6.3in (160mm) SLS Horex drums front and rear

**Tires:** 3.25 x 19in front, 3.5 x 19in rear

**Weight (dry):** 310.2lb (141kg) dry

**Seat height:** 30in (760mm)

**Fuel capacity:** 4.8gal (18ltr)

capacities, up to 980cc models. Thanks to this, Horex was by some distance Germany's No. 1 at the outbreak of World War II, its best-selling and most profitable marque, outstripping BMW which concentrated on more expensive, larger capacity models — and DKW and others, which focused on lightweight or midsized machines.

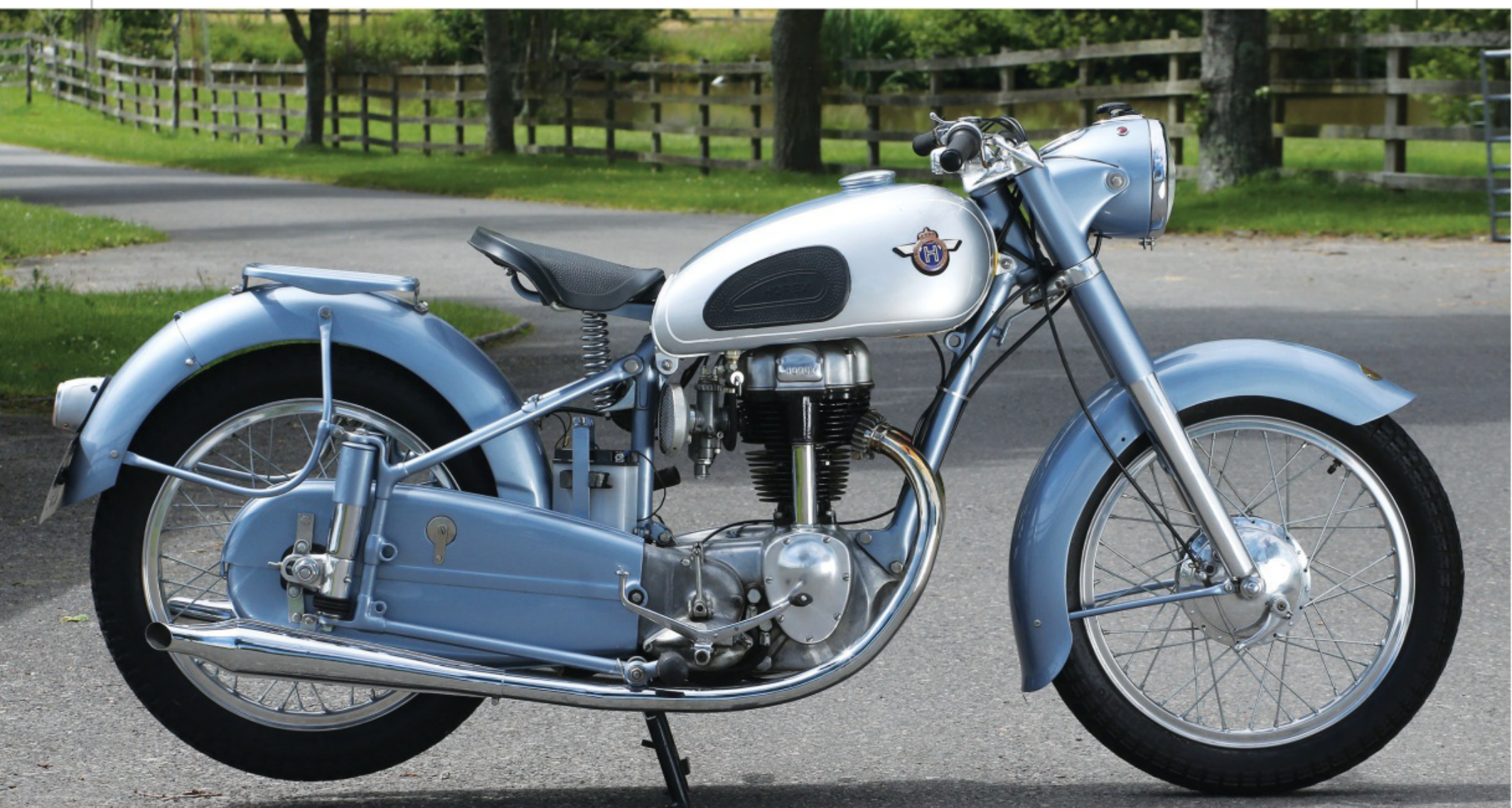
### Racing

Horex promoted its products through success in road racing as well as in long distance trials. Company boss and team leader Fritz Kleemann finished third in the first-ever bike race on the new Nürburgring circuit in 1927 on his OHV 500cc Horex single, bored out to 675cc, defeating the works Norton and New Imperial teams in the process. British ace Tommy Bullus came close to winning the 1929 German GP there on his 500cc OHV Horex, only to be denied by an unlucky last lap retirement. On three wheels, Karl Braun rode his outfit powered by a supercharged 980cc Horex SOHC parallel-twin engine to the 1935 German Sidecar title, and these racing successes duly boosted

sales, while the company's Columbus engines were also sold to other German marques like Victoria, AWD and Tornax. In 1933, in the depths of the Depression, but just as Adolf Hitler came to power, Horex introduced its first two twin-cylinder models, the 598cc S6 and 796cc S8 parallel-twins. Each used a single overhead camshaft driven by a chain running up the right side of the cylinders. These were the prototypes of many later such

engines made by others up to today, and appeared some four years before Edward Turner invented the archetype British parallel-twin in creating the Triumph Speed Twin — and a mere pushrod OHV design, at that!

World War II interrupted Horex civilian motorcycle production. But thanks to good relations established by the Kleemann family with the American occupying forces, and the fact that, remarkably for a facility building aircraft engines as well as motorcycles, its Bad Homburg factory was almost unscathed by bombing, Horex was able to resume volume production quicker than any other West German bike manufacturer. It was also the first to be granted permission, as then needed, to build a model larger than 250cc in capacity, a permission denied its rivals, including BMW, until 1950. This allowed Horex to introduce the ultra-successful 342cc OHV Regina single in 1949, which with its torquey long-stroke 69mm x 91.5mm motor became West Germany's best-selling bike in the early 1950s, with 18,600 examples sold in 1953 alone. Many went to government







departments, as well as the police, but 25 percent of total Horex production was now exported, to 65 different countries around the globe. One person seemingly impressed with the Regina was Soichiro Honda, who visited the Horex factory (as well as NSU) in 1953. The Horex influence is clearly evident in the Honda SA250 Dream of 1955 and the ME250 which debuted two years later, although the Horex OHV engine format was replaced on both models by Honda's soon-familiar chain-driven overhead camshaft layout.

A racing version of the OHV Regina appeared in 1950, but it struggled against rival purpose-built overhead cam racers, which convinced Horex management to introduce an all-new 500cc parallel-twin in 1951, named the Imperator. Claimed to produce 30 horsepower, this was now fitted with a central chain-driven single overhead cam, no longer offset to the right (a format which the Japanese duly copied in the following decade). But the roadster version, which appeared the following year, only reached production in 400cc guise, though a twin-cam version of the Imperator 500GP racer appeared in 1952. It won first time out at Hockenheim, although this promise was not fulfilled, so it was completely redesigned for the 1953 season, in which it again failed to make an impression. Meantime, ace German rider/tuner Roland Schnell built semi-works 250cc/350cc twin-cam Horex singles, which he raced very successfully using his own copy of the Norton Featherbed frame. In 1954 Horex factory

rider Georg Braun won the 250cc Saar GP at St. Wendel, then finished second on his 500cc single at the Nürburgring to Ray Amm's works Norton Manx, defeating the entire BMW works team of Rennsport flat-twins to do so. Braun also finished sixth in the German GP at the Solitudering in front of half a million spectators on a brand-new 350cc DOHC parallel-twin designed for Horex by Austrian engineer Ludwig Apfelbeck (later to become the guru of radial-valve technology, and designer of BMW's Formula 2 racing car engines). But this was the swan song for

**"This 1952 Regina 350 came to Sammy already restored, having been purchased in Hungary."**

Horex in GP racing, as changing market conditions and steeply declining production eliminated both the rationale and the budget to continue racing.

In 1953 Horex had introduced 250cc and 400cc versions of the Regina. Between April that year and the following November, Horex enthusiasts Norbert Wittasek and Eduard Edilitzberger completed a 29,558-mile round-the-world journey on their 350 Regina, attached to a heavily laden sidecar carrying all but the proverbial kitchen sink. But, owing

to the drastic decline in motorcycle sales with the concurrent boom in small cars, Horex production had by now begun to nosedive down to a mere 5,000 bikes in 1955 from the 18,500 units sold in 1953. At the end of that year, Horex replaced the OHV long-stroke Regina with the unit-construction 350cc Resident single, with an all-new overhead-cam short-stroke motor. The significant development costs of this were compounded by the debut in early 1956 of the disastrous 250cc Rebell scooter, with an all-new horizontal-cylinder overhead-cam engine — so ill-conceived that reportedly the firm was not able to sell a single example! Horex production for 1956 fell to just 2,600 units, although the company received a short-term lifeline by producing children's toys and gardening tools, and becoming a component manufacturer for Mercedes-Benz. But Horex eventually closed early in 1958, and in 1960 Daimler-Benz acquired its Bad Homburg factory site for its own use.

Meanwhile, though, a 500cc parallel-twin derived from the Imperator continued in production, but in Japan, produced by Hosk, a former licensee of Horex. In the late 1950s, Hosk was bought by Showa, which in 1960 was itself in turn acquired by Yamaha. The Iwata factory's engineers were thus able to use Showa's technical assets, developing a 650cc version of the 500cc Horex-Hosk SOHC parallel-twin design, which duly gave rise to the XS650 which debuted in 1969. This was Yamaha's first 4-stroke twin, which





Alan Cathcart rides the Horex Regina at the Sammy Miller Museum.

underpinned its attack on the European and especially American motorcycle markets. Strange, but true!

## Revivals

In the late 1970s, German entrepreneur Fritz Roth attempted to revive the Horex name with Friedel Münch, using a 1,400cc turbocharged inline four based on Münch's Mammut, and a series of 50cc 2-strokes, although these were in fact badge-engineered Testi machines from Italy. But that Horex revival fizzled out in 1982, though in 1984 Roth tried again with another Italian makeover, this time a Rotax-engined 500cc café racer made by HRD in Busto Arsizio, right beside the MV Agusta factory, until they too went out of business. Then, in 1992 the Horex name was used on a 650cc Honda Dominator-engined single-cylinder café racer called the Osca, which was briefly built and sold in Japan before it too died. Most recently, in 2005 high-mileage motorcyclist and IT entrepreneur Clemens Neese obtained the rights to the Horex name, and in 2012 unveiled the impressive-looking and soundly engineered 1200 VR6 streetfighter, powered by a narrow-angle 15-degree V6 engine designed by Ludwig Apfelbeck's disciple, Rupert Baindl. But problems with suppliers meant the money ran out before volume production could commence, and the project was

taken over by Karsten Jerschke, owner of Germany's largest carbon fiber manufacturer, 3C-Carbon Group AG. He's just re-launched the Horex brand with an updated VR6 — see [horex.com](http://horex.com).

## The Regina

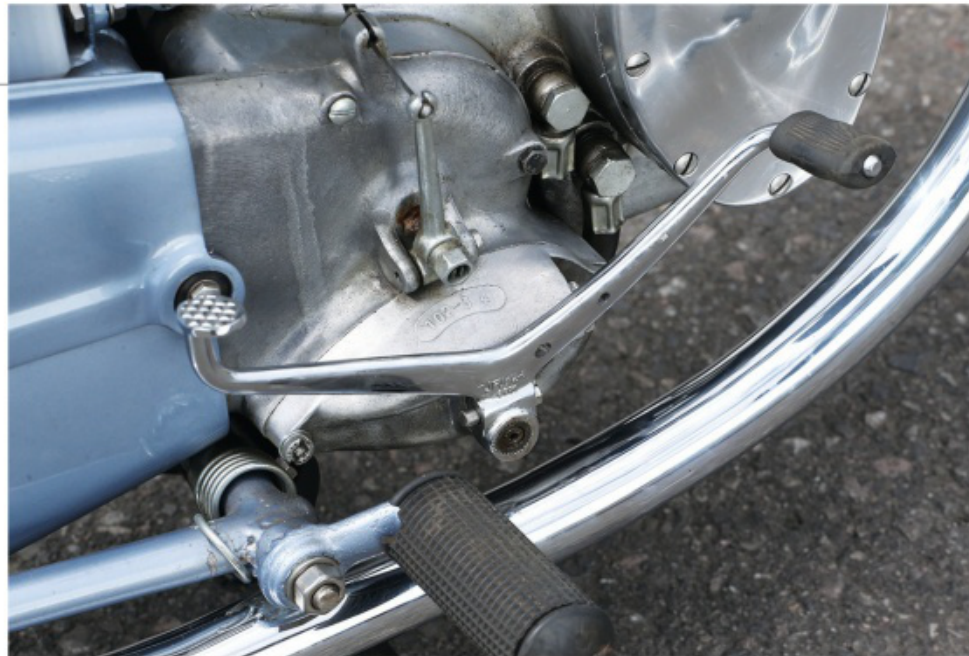
Despite no less than 74,300 examples of the Horex Regina being built between 1949 and 1956 (predominantly in 350cc guise but also in 250cc and 400cc variants), Germany's best-selling classic-era bike is a rare sight outside that country. But a mint example has just been acquired by the ubiquitous Sammy Miller for display in his eponymous museum ([sammymiller.co.uk](http://sammymiller.co.uk)) on England's South Coast, where it will form part of a fascinating proposed German Corner in the new 10,000-square-foot, two-story extension he's now received planning permission to build, which will be open to the public next spring.

"I've always enjoyed German motorcycles, and not only because I had so much success racing my NSU Sportmax, and winning the North West 200 three times with it," Sammy says. "I admire their emphasis on quality and sound engineering, and their methodical approach to doing things right. So I envisage creating a German section in the museum extension, which will include examples we already have of Adler, Victoria, IFA, Maico,

MZ, Münch, Zündapp and now Horex models, as well as several BMWs. And I'm going to keep an eye out for interesting new additions to that lineup, too."

This 1952 Regina 350 came to Sammy already restored, having been purchased in Hungary in April 2015 for €6,650 with matching engine and frame numbers 3060252, by Sussex enthusiast Bernard Stevens. Delivered new by Stuttgart's Horex dealer Otto Schick, according to the plate on the front mudguard, it's one of the second series of such bikes introduced in 1952. It features a larger capacity 4.8-gallon fuel tank (up from 3.6 gallons), enlarged fenders with greater valancing for increased weather protection, and 30 percent more power from the low compression (6.8:1) dry sump long-stroke engine. It now produces 19 horsepower at 6,250rpm, up from 15 horsepower at just 3,500rpm on the first series model introduced in 1949. Despite appearances, this is an OHV design, not a cammy one, thanks to the twin pushrods being squeezed into the chrome external tube on the right of the cast iron cylinder, which gives it the appearance of a bevel-drive OHC engine. It's a good-looking design by early postwar standards, with the pair of chromed exhausts sweeping gracefully away either side of the bike from the twin-port head to end in slender silencers.





The fully enclosed chain lives on the right side of the bike (left) as does the dainty heel-toe shifter for the 4-speed gearbox.

The Regina's bolted-up crankshaft, with its roller-bearing big end assembly and one-piece connecting rod with phosphor-bronze small end bush supporting a three-ring Mahle piston, runs on three main ball bearings, with chain drive to the low-mounted camshaft. Valve clearances are easily adjusted by removing the large one-piece aluminum rocker cover and slackening the tappet nuts. The oil pump is housed under the timing cover on the right of the engine, with the tank centrally mounted low down beneath the rear engine mount, with a lockable filler cap on the left. A 26mm Bing 2/26/23 carb with a separate float chamber and Knecht air filter feeds fuel to the OHV cylinder head, which is cast iron on this bike even though an aluminum head was introduced in the year it was made. There's a 4-speed gearbox with oil-bath clutch, with the Latin-style rocking gearshift lever unusually mounted on the right on this German bike, when all its compatriot

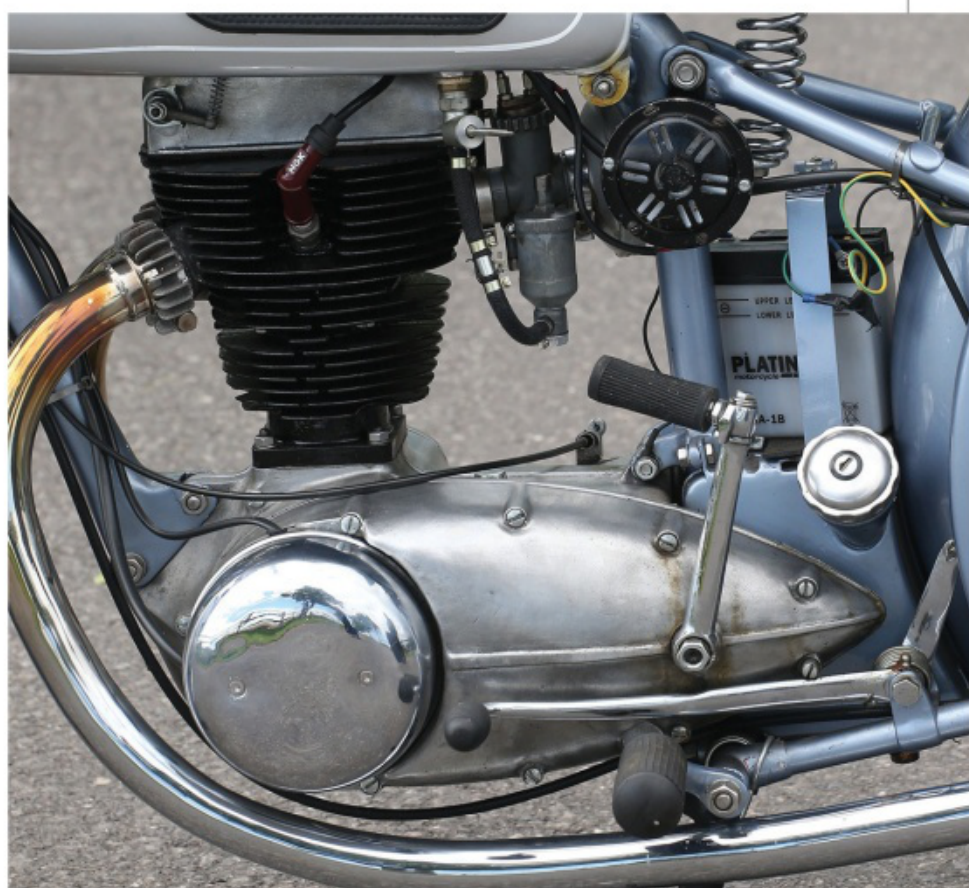
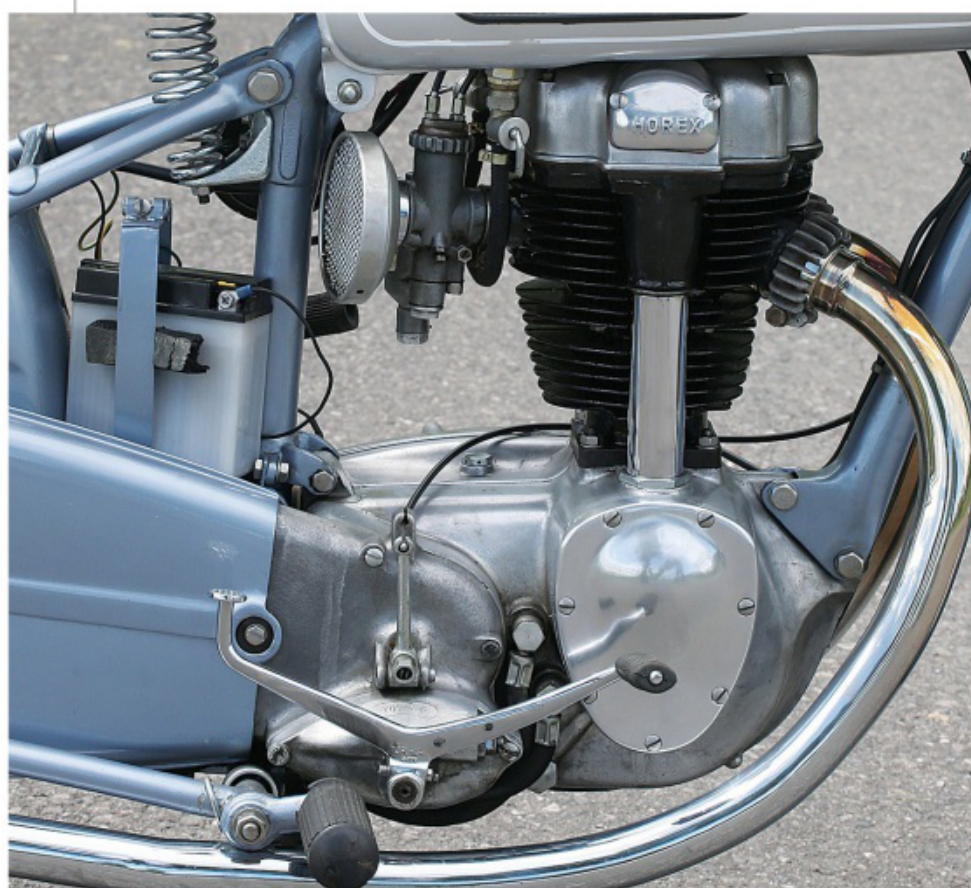
rivals had it on the left.

The right-foot change is just another Anglicism on a bike which could just as easily have been made in Birmingham as Bad Homburg. However, the left-foot kickstart takes some getting used to. I preferred to stick it on the main stand, then start it standing next to it and kicking the low compression engine over with my right leg, after flooding the Bing carb, lifting and turning the Bakelite key in the headlamp shell, setting the mixture on the right bar, and working the valve-lifter on the left. There's a healthy crack from the twin exhausts once it chimes into life, and despite the engine's ultra-long stroke dimensions, it has the sound and feel of a willing revver. Nice.

Kick down with your right heel to select bottom gear (there's a 102-3-4 legend cast into the outer gearbox housing to remind you what's on offer, in case you were unsure!) then look out for any stumps you can pull while accelerating off the mark.

That's because the Regina has unexpectedly good torque low down for a 350, coupled with an ultra-low 3.25:1 bottom ratio in the crisp-changing gearbox, with a B-I-G gap to the 1.81:1 second gear, which as I proved to myself the Horex is perfectly happy to start off in on level ground. This is all obviously aimed at the sidecar fraternity, for whom the Regina was a popular and versatile tug.

Once underway it's hard to not feel impressed by the sense of substance the Horex conveys. It feels tight and solidly built, which I suppose it is in weighing 310 pounds dry, and while the plunger rear suspension is pretty hopeless, the cantilever-sprung Denfeld saddle gives a sense of floating along on a magic carpet ride — I kid you not: it's hyper-functional. You're still aware of the 19-inch rear wheel skipping about over bumps beneath you, but that's transmitted via your legs rather than your butt. The 35mm oil-damped fork made by Horex itself is pretty good



A 26mm Bing 2/26/23 carb feeds the 342cc air-cooled single (left), which makes a claimed 19 horsepower at 6,250rpm.





## The Sammy Miller Museum

The Sammy Miller Museum ([sammymiller.co.uk](http://sammymiller.co.uk)) in New Milton, Hampshire, U.K., is crammed full of interesting machines — including factory prototypes and numerous ingenious designs from all over the world. It also counts as one of the world's largest collections of exotic racing bikes, all of them in running order and including the legendary Moto Guzzi 500 V8, the supercharged AJS 500 V4 and post-war Porcupine, and innumerable famous bikes from Triumph, Norton, AJS, Velocette and many more. There are also offroad enduro, motocross and trials icons. The museum is open to visitors daily from 10 a.m. year-round.

for such an early telescopic design, and especially a volume production one built to a price. Set at a 29-degree rake with a reduced 73mm of trail, it damps out road rash quite effectively, though bigger bumps will still overcome it. Still, for 1952 the front suspension must have been a powerful marketing tool for Horex dealers. Less so would have been the brakes, a puny 6.3-inch single-leading-shoe Horex drum at either end which I had to use in concert to gain any significant stopping power — and that was riding solo. With a sidecar attached, you'd need to be very cautious about

braking distances from the 60mph cruising speed shown on the speedo that the Horex is quite happy to run at in relaxing mode in top gear. You'd probably want to use engine braking to best advantage in stopping, but be careful not to use bottom gear, else a bent pushrod would be the least of your troubles! Horex claimed a top speed for the Regina 350 of 78mph, a claim that's comparable with that for British equivalents like the Matchless G3L and AJS Model 14 — though a ZB32 BSA Gold Star would have been in a different league!

Well engineered, styled with flair,

and soundly manufactured with a sense of substance I hadn't expected before riding it, it's easy to see how the Horex Regina was such a popular buy for German buyers in the 1950s. They would have relished its spacious, comfortable riding position. But the advent of the affordable small car, with all its greater conveniences, spelt time's up for Horex, and for so many other companies like it. It had been great while it lasted, and the Horex Regina must have transformed many lives in terms of convenience and dependability in postwar West Germany. **MC**

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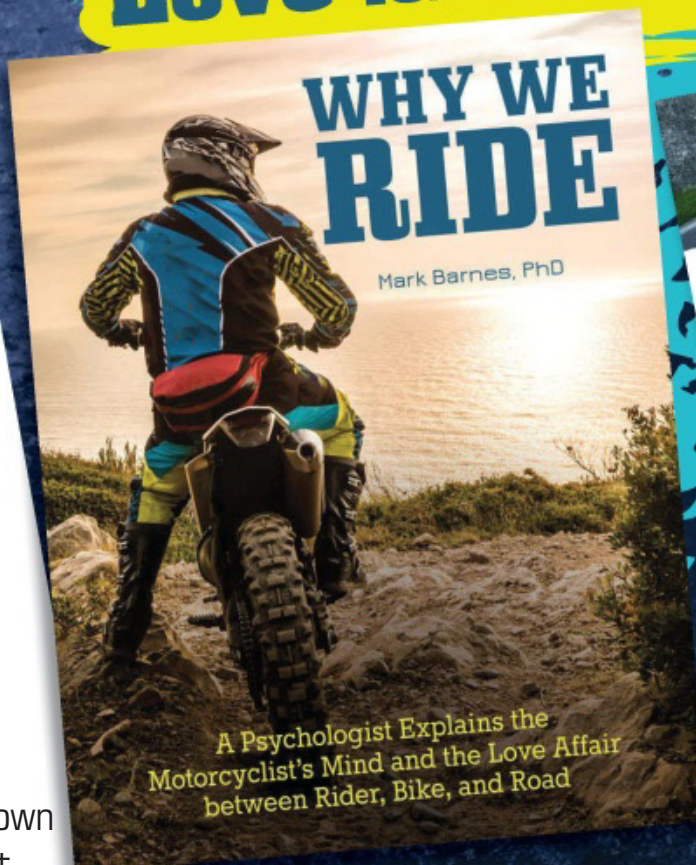
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# THE CB750'S SECOND COMING







# 1979 Honda CB750K Limited, aka 10th Anniversary Edition

Story and photos by Dain Gingerelli

By 1979 Honda's groundbreaking CB750 was old news, its landmark single-overhead camshaft engine considered a relic compared to the newer DOHC designs from Kawasaki, Suzuki and Yamaha.

It was time for a replacement, and with muted fanfare the CB750's 10-year tenure as the industry icon was unceremoniously halted, treated like warm beer or yesterday's pizza. But it deserved a more fitting send-off, and for that we turn to one of the notable motorcycle journalists of that era, Frank Conner, who wrote about the termination of the original CB750 for the September 1978 issue of *Cycle Guide*.

Wrote Conner 41 years ago: "In 1979 the Honda CB750 will bite the dust. Think about that: It's like saying they're actually going to stop production of Kleenex." Fitting words, considering the CB750's demise led to more than a few enthusiasts shedding tears of sorrow that mournful day.

Then Conner got to the heart of the matter, writing, "But the ordinary garden-variety CB750 is easily the most important motorcycle introduced since World War II. In 1969 it blew everybody's mind; it generated more excitement among more riders than anything since the French first started bolting gasoline engines into bicycles. It was so influential in the world of motorcycle design that today you can glance at any street machine and tell whether that bike was designed Before or After." Conner went on to cite various examples of the CB750's greatness, but you get the picture. The CB750 was a legend in its own time, and unquestionably will remain so as long as internal combustion engines play a key role in human transport.

But in terms of that original inline four it was time to move on, and for 1979 Honda released the CB750's successor, the CB750K. The replacement not only had to surpass the competitors' 750cc-class models, the new CB750 also had to be miles ahead of anything the old single-cammer could do.

And it did just that, as told to the world by *Cycle Guide* editor Paul Dean in his CB750 road test appearing in the January 1979 issue. "The new model is still called CB750, but the resemblance stops right there. Aside from sharing a few sundry nuts, bolts and bulbs, any similarity between the old CB750 and the new is purely coincidental. And just one spirited chase along a twisty back road on this newest of Honda fours might have you throwing stones at the next '69-'78 vintage CB750 you see ... This, friends, is the CB750K, the middle-of-the-road 'civilian' model with four mufflers, one front disc, a drum rear brake and wire-spoked wheels — the do-everything workhorse commissioned to be saddle bagged, sissy-barred and highway-pegged in non-sporting cruise/commute/tour modes. Honda has a CB750F in the pipeline for the peg-dragging set, but it is essentially the same motorcycle as this baseline K-model."

Dean could have also mentioned a third CB750 variant, the Limited Edition, sometimes referred to as the 10th Anniversary Edition, which was on Honda's 1979 model-year manifest, too. That model fittingly included its own styling features that were special enough to right any wrong there might have been in how Honda coldly dumped the original CB750 after 10 years





## 1979 HONDA CB750K LIMITED

**Engine:** 748.7cc air-cooled DOHC transverse-mounted inline four, 62mm x 62mm bore and stroke, 9.0:1 compression ratio, 55.9hp @ 9,000rpm (period test)

**Top speed:** 124mph (period test)

**Carburetion:** Four 30mm Keihin constant-velocity, one accelerator pump

**Transmission:** 5-speed, chain final drive

**Ignition:** Electronic ignition

**Frame/wheelbase:** Dual downtube steel cradle/61in (1,549mm)

**Suspension:** Telescopic forks front, twin shock absorbers w/adjustable preload rear

**Brakes:** Single 11.6in (296mm) disc front, SLS drum rear

**Tires:** 3.5 x 19in front, 4.25 x 18in rear

**Weight (dry):** 517lb (235kg)

**Seat height:** 31.5in (800mm)

**Fuel capacity/MPG:** 5.3gal (20ltr)/37-51mpg (period test)

**Price then/now:** \$2,948/\$3,500-\$7,000



of dutiful service. The Limited Edition shared the new CB750K's basic platform, so it essentially performed much like its 1979 stablemate, although it was visually its own model.

### Same bike, different duds

Beyond the Limited's own two-tone paint scheme, courtesy of a specific color combination Honda termed Candy Muse Red and Red, the side covers displayed a special one-year

gold with green 10th Anniversary coat of arms. There was plenty of chromed components to be found on the bike, too, making it even more special. The exclusive model also carried a heftier MSRP, nearly \$3,000 compared to the standard model's \$2,598 tag. Further

offsetting the Limited from the standard CB750K, it checked in with two-piece Comstar wheels, initially used on the RCB 1000 endurance racers, plus later iterations of the original







single-cam CB750 Super Sport models. And, unlike the new CB750K's integrated taillight/seat combo, the Anniversary bike wore an older-style taillight assembly for a more traditional look that also helped show off the rear fender's chrome plating.

Perhaps most notable to many of the Limited's customers was its stepped seat with chromed passenger grab rail. The Limited's seat also differed from the standard CB750K's, using a 1960s-vintage passenger seat strap as found on the original 1969 Four, plus the upholstery bore real stitching in its seams. Moreover, with exception of the seat strap many of those new items gave every CB750K enthusiast a peek into the future because the following year the standard-issue CB750K checked in with similar components, although it retained the wire-spoke wheels from '79. Consequently, the 1980 K model boasted more of a custom-bike appearance, and that, too, is another chapter in the new K's life cycle because the new-for-1980 CB750C Custom also took much of its styling cues from the 1979 Limited, including the inclusion of Comstar wheels for the new boulevard cruiser.

But we're getting ahead of our story. The '79 Limited Edition was, in reality, a one-year model celebrating the origins of a bike that, as Conner wrote in his 1978 commentary, "destroyed one national motorcycle industry [England's], crippled another [USA's] and established the Japanese beyond question as the world leaders in the design of mass-production street bikes." The original single-cam model had been that meaningful and influential. Thus Honda included a special tribute model in the 1979 lineup commemorating the 10th anniversary of the CB750.

"What you dial in with your right hand is exactly what you get at the rear wheel."

### Much improved performance

Whether it was the standard K model or the Limited Edition, though, one thing was for certain — Honda's new 3/4-liter-class motorcycle was designed to exceed performance levels of any other 750 on the market, which it did. As Dean wrote in his January 1979 road test, "Our CB750K impressed us as the best-handling four-cylinder street bike of any size we've ever tested. Period."

How did Honda manage that? Well, partly using technology gleaned from its recent foray into world championship endurance road racing (see *Parting Shots*, Page 96). Start with

the chassis, boasting an all-new frame with steering rake and trail set for precise feedback to the rider. That was coupled with suspension exclusive to the model. But while the 750K rewarded its rider with neutral turn-in and snappy handling through turns and curves, its suspension fell short for a smooth ride when the road got bumpy. Simply, the new FVQ (Full Variable Quality) twin rear shocks and front fork with new stiction-reducing dual-

stage chamfer stanchion tubes couldn't adequately handle abrupt bumps in the road. Clearly there was room for improvement, and that would appear later in the model year when the CB750F Super Sport checked in, and in terms of sporty handling that bike proved to be a complete game changer. But that, too, is a story for another time.

Instead, let's turn attention to the CB750K's new engine, which *Cycle Guide* described as looking "like a four-pipe version of the redoubtable CBX Six." From the crankshaft up to the cylinder head's Pentroof (Honda-ese for centrally located spark plugs) combustion chamber, this was an all-new engine. Its 16 valves took orders from two overhead camshafts, and the bank





of constant-velocity Keihin carburetors used a single accelerator pump system to help produce near linear throttle delivery. As the *Cycle Guide* report proclaimed: "What you dial in with your right hand is exactly what you get at the rear wheel." That was big news at the time because emissions-regulated motorcycle engine technology was in its infancy, and many brands (especially Suzuki) relied on their own style CV carbs to meet clean-air regulations for their inline fours. Most of those multiple fuel mixers, all strung in a row, were inferior systems compared to Honda's, producing overly sensitive carburetion that often resulted in a nervous, twitchy ride. Dynamometer graphs often showed erratic curves for an engine's horsepower and torque readings; not so for the CB750K, which in the case of *Cycle Guide*'s test showed relatively smooth power curves peaking at 55.9 rear-wheel horsepower at 9,000rpm and 36.7lb/ft of torque at 7,000rpm.

And thanks to the engine's inbred racing technology, the new inline 4-cylinder engine was 1.5 inches narrower than its predecessor, due in large part to a more compact alternator, located on the right, with the ignition on the left — completely opposite of the SOHC engine. The new 260-watt dyno's internal rotor was offset toward the crankcases enough that the crank main-bearing boss sat inside the deep recess in the rear of the rotor, resulting in the engine's narrower overall width. The revised location also put the heavy alternator closer to the chassis' centerline, resulting in better transverse weight balance and improved directional stability.

### What's that bike?

It wasn't the all-new engine or improved handling performance, not even the 10th anniversary factor, that sold one young man on the 1979 CB750K Limited Edition, though. Instead, back in 1979 Dan Miller fell in love with the bike's looks, even before he learned that it was a Limited Edition model.

"I was set on buying the new CB750K," recalls Dan, "but when I walked into the local Honda dealer's show-



The stepped seat, passenger seat strap and chromed passenger grab rail (above). The new-for-1979 16-valve dual overhead cam four (left).

in 1979.)

That was the beginning of what has turned into a 40-year love affair between Dan and the Limited Edition. See, he's owned six of them at various times in his life, and the bike featured here represents the culmination of that lot. Moreover, Dan's saga with the Limited is rather colorful. Here are a few highlights:

"I paid \$3,700 and change out the door for my first one," Dan recalls. Shortly after that a friend who worked at Kerker Exhaust asked if the shop could borrow the bike to fashion a new 4-into-1 system for its product line; in return Dan would be given a complete system for his bike. So Dan loaned his new Honda to Kerker, but during a test ride a lady drove her car smack dab into said bike. There was no serious injury to Kerker's test rider, but the bike was totaled.

Enter the replacement bike, and true to their word, Kerker supplied Dan with an exhaust system. That bike remained in Dan's stable for a few years until he traded it for a Pontiac Firebird. "The Smokey and the Bandit model," Dan proudly says. In subsequent years, including Dan forming a thriving automotive upholstery business, he bought three more Limiteds; two sorrowful basket cases, plus a runner showing only 12,000 miles on its odometer. Despite the low mileage, the engine's cam chain tensioner broke, so into the local repair shop it went where it sat ... for seven years! He also has a collection of assorted parts exclusive to the Limited Edition.

Fast forward now, to this



Thad Wolff and owner Dan Miller with Dan's beautiful CB750K Limited Edition, one of six he's owned over the years.



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Thad Wolff aboard the revived 1979 CB750K Limited Edition (left).

bike, one he spotted listed on eBay. To Dan's surprise the bidding remained soft and he paid — now here's the irony — \$3,700 for it. He and his favorite model Honda had gone full circle. This bike was dusty but not rusty, and in ideal condition to return to original condition. For that he called on his friend and one of the motorcycle industry's more colorful and respected individuals, Thad Wolff.

Thad's a motorcycle junkie whose career spans several decades in which he's competed in SoCal motocross, club road racing, even AMA Superbike racing where he landed a podium finish. Later he earned a class win at the revived Catalina GP (2012), plus he's competed in e-class AMA road racing, and countless AHRMA road races aboard various historic and not-so-historic bikes. Through the years he's appeared as photo model in numerous motorcycle videos, ads and brochures, and he remains active within the industry such that his eclectic background landed him in the Trailblazers Hall of Fame. He also restores and revives older motorcycles, and that's where he enters the story with this particular CB750K Limited Edition belonging to his longtime friend.

"Dan told me about the bike and asked if I could get it looking original and put back on the road," Thad said. The paint job and chrome were in surprisingly good condition, but only after some rubbing and polishing, with various pieces of hardware sent to the polisher for fresh makeup. Carbs were cleaned, fluids changed, new tires mounted, and more polishing and waxing ensued until soon enough the bike was ready for its close-ups, which you see here.

Dan helped, too, in the process locating a durable rattle-can paint for the engine cases. He settled on Dupli-Color's matching color. Its enamel-with-ceramic formula, Dan says, is heat resistant and matches the original color rather well.

Today Dan's 1979 CB750K Limited Edition — aka, 10th Anniversary Edition — remains one of the icons from an era when the Japanese brands established themselves as the leaders of a prospering industry. Without question, motorcycle sales in the 1970s were off the chart. Millions of bikes were sold during that time, so it's only fitting that the most volatile decade in terms of total sales, coupled with the voluminous number of individual models offered by manufacturers, is represented here by the very model that paid tribute to one particular icon — the original Honda CB750, a bike that helped vault Honda to the forefront of the motorcycle industry.

With that let's close, drawing from Conner's original 1978 tribute: "There was only one CB750. Adios, old friend." **MC**





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No trailer queen here, this 1934 Indian Four is regularly ridden.

# VINTAGE MOTORBIKE SHOW

## 2019 Pittsburgh Vintage Grand Prix

Story and photos by Dave Ryan

**T**he Pittsburgh Vintage Grand Prix is truly a “gearhead” event with something for everyone. In its 37 years it has evolved from a vintage race on city streets, with a car show on a bucolic golf course, to an 11-day happening with events including closed course racing at Pittsburgh International Race Complex (a stop on the MotoAmerica calendar), a rally, various exhibitions around the city, a black tie event and more. Over the years I’ve seen everything from a 1930 Bugatti Type 35B GP car (raced at Monaco, twice!) to such marques as Allard, Lotus and Elva. Present have been historic Shelby Cobras, BMW 507s, Gullwing Mercedes, a Ferrari GTO and an AMC Matador — Barcelona edition! Since 2012 there has also been the Vintage Motorbike Show (finally, he gets to the point). It’s the same story as the rest of the shows: an interesting mix, a relaxed atmosphere and lots of fun. I remember walking up the hill to the bikes a few years ago and commenting about a very rare early Buell race bike on display (a RR1000R) only to realize there were a few more — along with Eric Buell himself!

The PVGP is always held in July, seemingly on the hottest days of the year. This year was no exception (July 11-21); shade and hydration were the orders of the event — especially during the

last weekend, when the Motorbike Show is held. For about five years the show was run by Tip Paul, the Western Pennsylvania Representative of the Moto Guzzi National Owners Club. Tip brought two of his impeccable Guzzis; a 1938 Condor and a 1947 Super Alce (Elk). He has no documentation to prove the Condor really is a factory racer, or if it was merely restored to those specifications in Italy where he found it about four years ago. As military bikes are wont to do, the Super Alce drew lots of attention.

The Ohio Valley BSA Owners Club has been very active in the event since inception; particularly the Kubena family (Bud, Barb and their son Kerry). Bud is the club’s vice president, Barb has the role of treasurer (among other duties). The Kubenas brought five BSAs and a Bultaco to the proceedings. The Bultaco is a Factory Flat Track Astro from 1975 (370cc), raced by Kerry in the 1990s. Others displayed included a 1960 Spitfire Scrambler (race ready from the factory); a 1944 military M20 (complete with authentic 1944 saddle bags); and a very tasty original, unrestored 1967 Shooting Star (street model Victor). The build quality on the restored machines is incredible; and they do all their own work. This is most apparent in the last two of their displayed BSAs: a 1964 B40 trials bike and a 1950 Star Twin Flat Tracker. The trials bike is custom built using a correct Otter frame with many home fabricated parts. The detail work is exquisite, the end result so





Clockwise from left: This 1947 Moto Guzzi Super Alce was a crowd favorite with its dual sprung seats; a very clean and apparently original paint Suzuki 500 2-stroke; a 1964 BSA B40 trials bike, with an Otter frame and amazing detail work.



Left to right: a 1944 BSA M20 in period military garb; a 1938 Moto Guzzi Condor, with a "bacon slicer" exposed flywheel.



Left to right: 1950 Ariel Square Four, three model years before the four exhaust pipe redesign; a rare 1960 BSA Spitfire Scrambler.





Still considered by many the Holy Grail, the Vincent Black Shadow.



In 47 years, this BMW R60/2 has never stranded its companion.



A sweet 1975 Bultaco factory flat tracker.

beautiful it's hard to believe someone would actually subject it to trials work — but Kerry has done so successfully. The Flat Tracker was ridden by Will Ahart to the Florida State Championship in 1954. Bud has some great Ahart memorabilia to go with it, including his helmet and kidney belt. This rare factory racer has been painstakingly restored to as-raced condition.

Ken Munz brought his mischievous nature and eclectic taste — evidenced by some Sears Allstate entries (including a gorgeous café'd Sears, nee Gilera), a couple of choppers and a fantastic 1960 Matchless G12. Ken says the Matchless “ruined his life” as he went through the four-year restoration process. He found the bike locally in bad shape 30 years ago. At the time, he didn't know what a Matchless was, but he thought it was cool; so, off he went on his adventure. His expertise is evident in all his work.

On hand was a jewel-like 1950 Ariel Square Four restored and owned by Chris Engelsiepen. He recounts years of sourcing parts from around the world to finish the original frame/engine/transmission machine. Chris also brought his 1956 BSA Gold Star. One of these days I hope to get a look at his '39 Ariel.

A star of the show was a 1934 Indian Four owned by Mike Culig. Mike got his love of the Indian brand (along with his 1934 Sport Scout) from his father. He fondly relates stories of riding the Sport Scout through the woods as a kid; and how he only likes to ride handshift bikes — it's what he knows best. The Four was owned by the mechanic that did some work on his Sport Scout over the years. After being rebuffed for 20 years, he finally closed the deal to buy it. Both are ridden regularly, the Four just went through an engine rebuild.

Another longtime ownership story comes by way of Joseph Baird. His 1962 R60/2 has been with him since 1972 when he bought it as a chopper. Hard to imagine he found it with a “king and queen” seat and metal flake paint, including lace and spiderweb effects. Gads. Sounds tasteful. It did still have its Earles forks; so he bought it, swapped seats, painted it and rode it for 40 years. It has since been redone as a rider, so some BMW purists look askance (it's lovely). He also brought his wife Kathy's 1955 R25/3 and displayed them both in a different area of the overall PVGP car show. They also graced another event in a trendy part of Pittsburgh (on Walnut Street).

Typically, Richard Spagnolli (AMCA President Emeritus) brings something from his incredible motorcycle collection, but he was unable to attend the main show. However, he did show his award-winning 1950 Vincent Black Shadow at the Walnut Street event. Sitting next to Mike's '34 Indian, they were quite a pair.

The Vintage Motorbike Show is now being managed by the Pittsburgh Ton Up Club, specifically by Patrick Martin. Patrick is looking to expand the scope of the show; maybe get some vintage racing bikes on one or both tracks. The PVGP benefits charity, raising funds for autistic and intellectually/developmentally disabled individuals in the Pittsburgh area (\$5.5 million since 1983). Most events are free for spectators. See you here next year! On the web at [pvgp.org](http://pvgp.org). **MC**



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Photo: Jim Priest

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# BAD ASTRA PER ASPERA

## The Sea Beast finale

Story by Shane Powers  
Photos by the staff

**T**he motto of the great State of Kansas, where I have lived my entire life, is “Ad Astra Per Aspera,” a Latin phrase meaning “To the stars through adversity.” This seemed like a fitting sentiment as I reflected on the happenings of this summer’s Topeka AHRMA event.

*Editor’s note: This story is the culmination of the Sea Beast Saga, in which ad man Shane Powers builds a Honda CB350 to go racing with AHRMA. To read the full build, head to [motorcycleclassics.com/blogs/mc-dispatch](http://motorcycleclassics.com/blogs/mc-dispatch).*

On Thursday before the race weekend began, Editor Hall and I pulled into Heartland Park with the Sea Beast in tow. We decided on our pit location and began the process of setting up camp. We made pleasantries with the neighbors, one of whom told me he had been following this project. I was flattered to say the least. I’ve always assumed a few people outside my immediate circle of friends and family had read my blog, but I can’t say I ever expected to actually hear that directly from them. As it turned out, these amicable neighbors were a group of gentlemen also racing CB350s. Scott Wilson was racing Production Lightweight AND Heavyweight on his CB, and David Miller and Bill Howard were racing their own CBs in the Sportsman 350 class. Supporting the group was Chuck, whose last name evades me (sorry, Chuck), the wrench behind Rebel Dog Racing. These guys were friendly, they were fast, and they became a corner post in my race campaign right off the bat.

I was extremely nervous about passing tech inspection; I had never done it before, and it was kind of the final exam





I'm glad editor Hall was able to capture the essence of my single lap at speed!

of my project. I asked one of my new pit-neighbor-friends if they would mind taking a look over my bike to see if anything glaring was going to cause me to fail tech. With tech opening at 7 a.m. on Friday morning and race school beginning at 8, failure was not an option. David took a walk around the Sea Beast and pointed out a handful of fasteners that the tech inspector would want to see safety wired. I made the recommended alterations and got as prepared as possible for the long day ahead before I tried to get some rest.

### Tech inspection

No amount of rest could have prepared me for the long day ahead, but it didn't matter because I hardly got any anyways. My nervousness and excitement combined with the unrelenting heat of June in Kansas made for a rather un-restorative night of tossing and turning in my tent. At 5:30 a.m. I got up, ate breakfast, and lugged my gear, the Sea Beast, and the thousand-pound lead weight in my stomach up to the tech building. The first AHRMA official I encountered asked for my name and transponder number. "So you're Shane Powers ..." This might be really good, or really bad. Has he read my writings? Is he aware that I'm a mechanic of intermediate aptitude, throwing my final product at the mercy of his tech team? I never found out. He didn't elaborate and I didn't ask him to. To my eternal surprise, the inspector looked around, twisted



Conferring with my mechanical advisors, pit neighbor Chuck (left) and Keith Fellenstien.



Writing grid position on a piece of tape on the tank. The trailer also served as a stand.

and released my throttle to ensure it snapped back properly, squeezed my front brake lever, and put his sticker of approval on my front number plate! Amazed at having overcome my first, and what I thought would be largest, obstacle of the weekend, I returned the bike to my pit and double-timed it over to the Fast & Safe classroom.

### On to the track

The first classroom session was brief. We discussed the various flags we could encounter as new racers, took some specific instruction regarding our first few laps, and onto the track we went. That's when it all started coming unglued. Having come down to the wire on completing the bike at all, and not



having access to a suitable location to test the bike at speed, the Sea Beast had not been thoroughly proven. I had ridden it around my block a couple times in constant fear of encountering an officer of the law who might want to discuss my lack of lights or registration. As I turned the bike onto the track for the first lap, it was almost immediately apparent that something was amiss; this thing's a dog! I didn't know exactly what the Sea Beast should be capable of in terms of performance, but I knew there was a massive disparity between the claimed top speed of 110mph and the roughly 40mph I was currently capable of achieving. After a few laps around the track at ego-bruising slow speeds, we returned to the classroom where I was promptly dismissed to fix my bike.

One thing at a time, and one failed track session after the next, various mechanics and I worked our way through pos-



Hellraiser, the petcock made mostly from hardware store plumbing parts.

sible fixes; pod filters were first altered, then removed. Fuel filters were removed. Timing was checked. I limped the poor Sea Beast, and dragged my dejected self, through a gauntlet of wrenching, testing, classroom training, testing, wrenching, and testing again. I was able to keep the bike on the track for all required activities, I passed my

verbal exam, and I was granted a probationary AHRMA race license, but I was also told "you can't take that machine on the track tomorrow if it's not fixed!" Friday night found Editor Hall and myself checking and re-jetting carburetors with some smaller main jets provided by our pit-neighbor-friends.

With the new jets in place, I set out for my first real race on Saturday morning. My family and a few friends had come to watch, which only made it worse when the bike seemed fixed, and then lost power before turn one of the warm-up lap. I left

Suited up and ready to roll for the Sunday race.







Clockwise from above: David Miller (right) and Bill Howard (center) on the Sportsman 350 podium. Scott Wilson (left) and Brady Ingelse (center) on the Production Heavyweight podium. Don't crash here!

the track unable to grid for my first race and feeling lower than dirt.

## Bummer

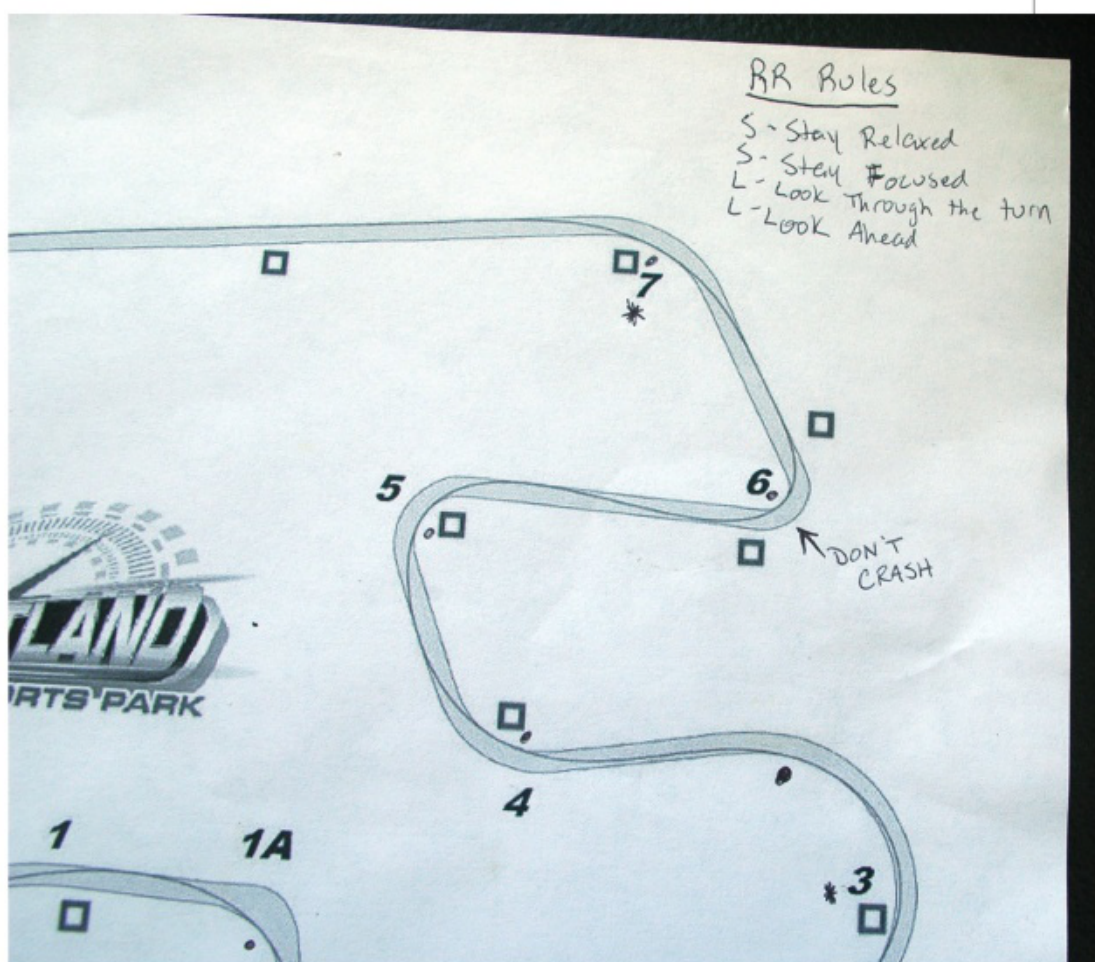
The bad news was plenty; I had missed my race, embarrassed myself in front of my friends and family, I had built a bike that I could probably outrun in a foot race, and even with the help of some great mechanical minds, I couldn't figure out why! The good news seemed only one; it was early in the day and I wasn't expected back on the track for 24 hours. I was battered, but not yet beaten.

The problem was eventually discovered in fuel delivery. A faulty petcock was dripping enough fuel into the carburetors to make the bike go, but not enough to go fast. One last time, our pit-neighbor-friends came to the rescue! First they commiserated: "Those petcocks are garbage!" Then they guided: "Here's what we do." I was handed a hardware store shut-off valve and given a list of necessary supplies to gather. A run to the local hardware store for a couple brass fittings was made before lunch. As I licked my wounds at a nearby brew-pub, Editors Hall and Fellenstein kindly assembled my new fuel supply gizmo and left it in the pit for me to install upon my return.

## Redemption?

If the Sea Beast is the astronaut turned bionic superspy, Steve Austin, the new petcock is Hellraiser. All function and no form, this collection of brass and rubber held together with myriad hose clamps was exactly what the doctor ordered! I completed Sunday morning's practice session at speed and I was pulled from the depths of despair one more time as the last race of the weekend loomed mere hours away. My family gathered again, and I set out to grid for the first time.

There were four racers on my grid including the Sea Beast and me. I was vibrating with nerves and excitement as I pulled into position, put the bike in neutral, and watched the starter. On his cues, I clicked the Sea







'Tis but a flesh wound: The clutch lever got a little road rash (left) and the left rearset is a little tweaked, but nothing too bad.

Beast into first gear. The cacophony of engine and exhaust noise grew around and within me. With no tachometer on the bike it was hard to judge how present a part of that cacophony my own machine was. No matter. The green starting flag went down, I dropped the clutch, and the Sea Beast lifted its front wheel like a tiny, pissed-off bull out of the chute. I giggled like a leather-clad child at the absurdity of it and opened the throttle as I pushed towards Turn 1. In my first lap, I passed someone! With my class consisting of four racers, I was in a podium position! First and second place had a sizeable lead on me, but I could see them!

At this point I feel it's prudent to pause the race story and impart a lesson Andrew Cowell shared during race school, and a piece of racer lore David Miller shared early in the weekend, both of which were apparently lost on me. Andrew's lesson was this: race the track first, then race the competition. David told me "I've got new leathers this weekend and if I go out on the track in them, I'm going to go down. That's why first thing tomorrow morning, I'm going to put them on and go roll around in that dirt over there." I told him I would be right there next to him in my shiny Vanson suit. In all the mechanical hullabaloo, I must have missed that party.

## The AHRMA Fast & Safe Roadracing School

Recently I undertook a project that culminated in my first experience riding a motorcycle on a race track. It was exhilarating in a number of ways, and I immediately understood how a person could grow to like it. Opportunities to really see the outer limits of our riding abilities and those of our machines are few and far between, but there is no denying the joy to be had in opening the throttle of a vintage motorcycle and leaning into a long sweeping curve. Maybe you've participated in track days at your local race track, or maybe you've never been on a race track before, but you think there might be a place for you on the grid at an AHRMA race. Regardless of your level of experience on the track, there is something for you to learn at AHRMA's Fast & Safe Roadracing School.

Fast & Safe School is the high-speed version of the Motorcycle Safety Foundation's Basic RiderCourse. When you take the MSF course they teach you about lane positioning and that a motorcycle is, in fact, capable of running over a 2x4 should you ever encounter any loose lumber on the road. When you take the Fast & Safe Roadracing School, they teach you not to look backwards, you learn the on-track communication system and how to read the various flags, and you learn the best practices to

observe as you and half a dozen of your closest friends race yourselves, race the track, and race one another.

Your experience at Fast & Safe School will be divided into a series of rotations between classroom time and track time, plus a provided authentic race track lunch of a turkey sandwich and chips! First thing in the morning, directly after passing tech inspection, you will report to the classroom where the instructor will give you the most basic of instruction. Next is a briefing on entering and exiting the track, as well as a few hand signals that the instructor will use to guide you on your first track session. You'll be shown the "lines" of your specific track; essentially a map of the most efficient path to follow around the course.

After this brief initiation, you'll don your race gear and head out for a few laps. Upon returning from your first track session, if you ride anything like I did, your instructor will kindly tell you that you're terrible at being on the track, why you're terrible at being on the track, and what you should do to become less terrible at being on the track. Some pieces of advice I heard in the classroom after the first track session were, "Study the map of the track, make sure you're staying on your line," and, "We're going to work on your body

positioning. I don't want you cornering any faster until you're getting your knee down." That last one wasn't directed at me. In fact, I was chided for being too slow. As mentioned, some mechanical issues caused my bike to run poorly all day while I was in school. It was a major point of frustration and worry because I thought if I wasn't present for every minute of class that I would fail the course and not be able to race the weekend. I learned that it was acceptable to miss a little classroom time to work on the bike, even though it isn't ideal. There is so much important technical information disseminated during classroom time that I wish I could take the course again to gather what I missed and refresh what simply didn't stick the first time.

Once you've completed your day of cycling on and off the track, you will face what essentially amounts to two "final exams." The first, and by far the most fun, is the mock race. During the mock race you and your classmates will grid just as you would in an official race. Other racers who are present for the weekend, AHRMA staff, and anybody so inclined will gather at the starting line to cheer. The flag man will do his ritualistic dance and the field will take off. Your goal is to go fast, because it's a race, but not too fast! Remember, this is





Participation trophies presented by tech editor Fellenstein and my nephew, Fisher.

Turns 5 and 6 at Heartland Park are a relatively sharp right, followed quickly by an extremely sharp left. On my second lap I successfully negotiated Turn 5, but I knew I was too hot coming into the sixth. I minded my lessons; look through the turn, brake hard, don't crash ... the first two went pretty well. So well, indeed, that I was as surprised as anyone when suddenly I found myself no longer riding the Sea Beast, but instead sliding along beside it. I had three thoughts in very short order. First: "So this is crashing. It's not so bad." Second: "I hope my bike is OK." And third: "I hope my leathers are OK." As both rider and machine came to rest in the grass, I took stock: I'm OK. No major damage. I picked up the Sea Beast. It seemed OK as well, but some perceived twists in the front end made me feel uncomfortable getting back on and finishing the race. The bike turned out to be OK

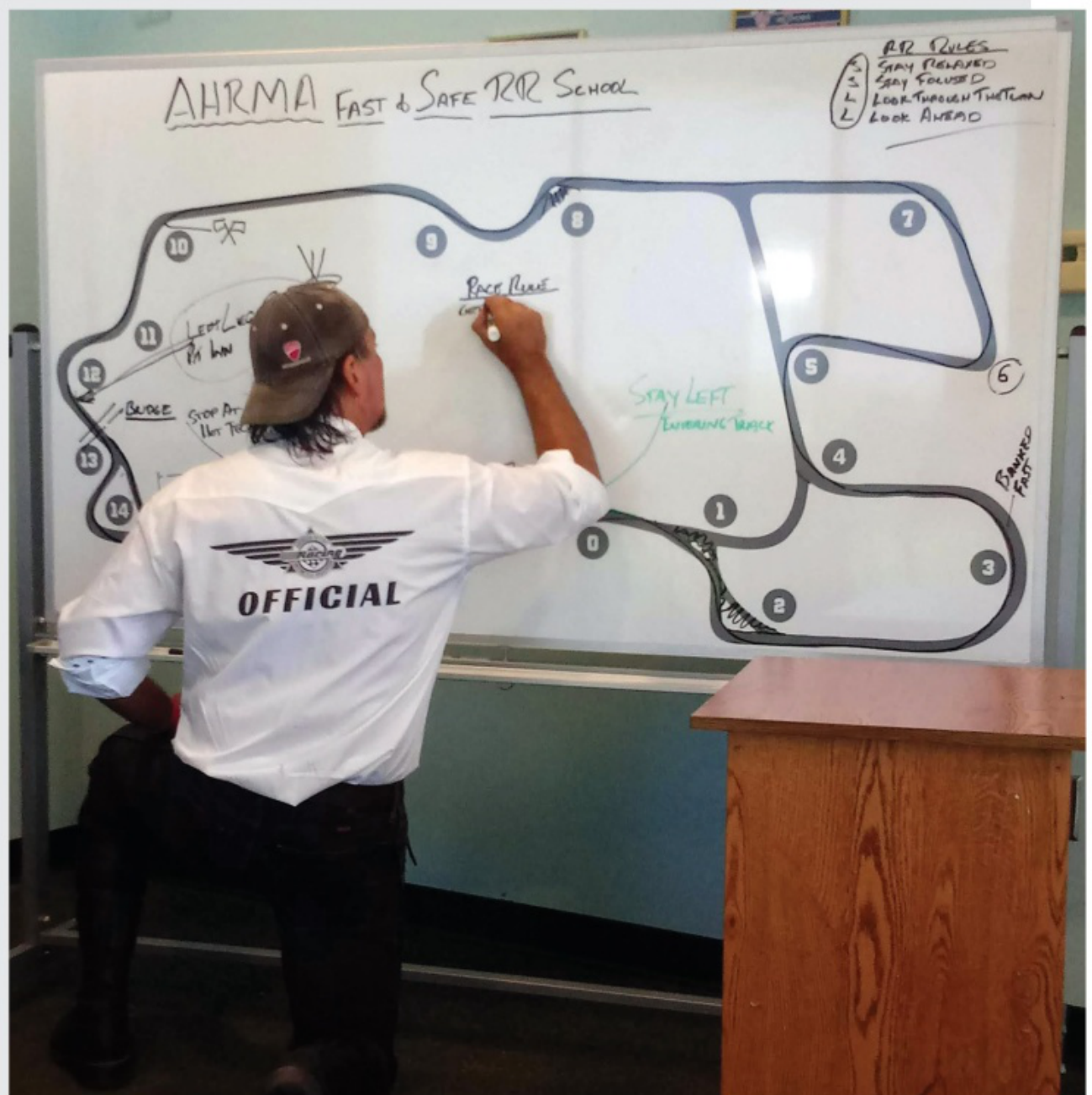
as well, and as I stood in the grass waiting for the tow truck to come pull us from the course, I thought "This is the perfect ending to the story. If I couldn't win, I'm glad I crashed."

With the crash behind me, and the race bike still capable of racing, I look forward to getting some more track time under my belt. I hope to participate in some track days at Heartland Park where I will sharpen my track skills. Over the winter, I plan to straighten up the bike's bent bits and improve my racing/pit setup so I can give the 2020 AHRMA season my best effort. I owe so many debts of gratitude to so many people for making this happen for me. All my sponsors, my family, the AHRMA team, my friends and colleagues here at Motorcycle Classics, and the guys at Rebel Dog Racing ... I couldn't have fallen without you! **MC**

your field exam and failure to complete it (i.e., crashing your bike or flogging it into mechanical disability) is failure of the course.

Upon successful completion of the mock race, only one final hurdle will stand between you and the illustrious world of vintage motorcycle racing: the one-on-one verbal exam with your instructor. During this exam the instructor will quiz you about the most important pieces of information you should have learned throughout the day; the four rules of road racing, how to react to different scenarios on the track, and what to do when you see any and all of the various flags that could potentially be waved at you. Having bested your mentor in this battle of wits, you will be handed your certificate of completion and with a firm handshake you will be an officially probationary AHRMA licensed racer!

If this sounds to you like the perfect way to spend a Friday, check out the race schedule. AHRMA offers the Fast & Safe Roadracing School at every race weekend of the year with the exception of Barber. The price for the Fast & Safe School is \$300 for the day, a great value when you consider the hours of classroom time, numerous laps around the track, and individual instruction from seasoned racers. For more, visit [ahrma.org](http://ahrma.org)



AHRMA instructor Andrew Cowell leads the Fast & Safe Roadracing School at Heartland Motorsports Park in Topeka.



# MOTORCYCLE CLASSICS HOW-TO



A Honda CB450 triple tree and a Triumph 500 headlight bucket and a steering damper knob, ready for a fresh coat of paint.

## Painting with Eastwood 2K Aero-Spray paint

SPONSORED BY

**BikeMaster**

**H**ave you heard the old joke about how to get to Carnegie Hall? Practice, practice, practice! Well, something similar can be said about how to get professional paint results from spray cans, but here the trick is preparation, preparation, preparation.

In this How-To we'll show you just how you can get durable professional results from modern spray cans, and how to do so safely. Cans of Eastwood's new 2K Aero-Spray Epoxy Primer (\$25 per can) and 2K Aero-Spray Chassis Black paint (\$25 per can) plus shipping are available from [eastwood.com](http://eastwood.com). Clear coat

is also available. Get a paint respirator (\$25) from your local big box home improvement center, along with some blue painter's tape. You should always use a respirator when painting, and this is especially important when you are using epoxy-type paints.

Wear rubber gloves if you don't want to spend time scrubbing paint from your hands. Old clothes will keep the inevitable overspray from ruining your favorites. If you don't have a dedicated paint booth, then pick a calm day, open up the garage and build a cardboard three-sided booth to reduce overspray and keep dust off your painted parts.



**1** Safety first! You may look silly, but it's important.



**2** Here's the headlight bucket from my Triumph. Other than touch-ups over the years, it's probably original paint. The media blaster booth will take all that off fast and efficiently.



**3** It's necessary to remove all the old paint first, we'll do that using the blast cabinet we have from TP Tools. Once the paint is removed we'll inspect the parts and clean them again with chemical cleaners. Just before we paint we'll do it again with a chemical cleaner.





**4** Time for surface prep. Mask off any surfaces that you don't want painted, like threaded pieces or clamping parts like the top of this Honda CB450 steering yoke.



**5** We'll be using Eastwood two-part spray paints. These differ from the usual rattle cans in that they have an epoxy activator. Once activated you have about 48 hours to use that paint in the cans, so it pays to plan ahead and have all the parts you want painted ready.



**6** To activate the paint, first shake the can well for three minutes.



**7** Remove the red button from the top of the can and place it over the stem on the bottom of the can. Press firmly to puncture the can within the can, releasing the epoxy activator for the paint. Shake again for three minutes to thoroughly mix the activator with the paint. Once you do this, you have 48 hours to use the spray can.



**8** After final chemical cleaning of the parts, primer them. Move the can parallel to the part. Start spraying before you reach the part and stop after you've passed the part. Many light coats are better than one heavy saggy coat. The same technique is used for the gloss black paint.



**9** Between coats, when dry enough, sand out any spatters with foam-backed wet and dry paper of 2000 grit. Again, this applies to the gloss black finish paint.



**10** Resist the temptation to use the absolute last of the paint in the can, as delivery pressure and spray pattern suffers as the can is exhausted. This part took a little extra effort because I was trying to use the dregs of a can.



**11** The final product. It looks good. Primed over two days (life of the can), then painted over two days (same).



**12** The finished parts back in place on my Triumph. Now the rest of the top looks like it needs work. Time to buy more paint!





**CHEERS TO THOSE LONG NIGHTS IN THE SHOP**

***BikeMaster***

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# Vintage bikes are cool. The people are cooler.

**V**intage motorcycles are cool. No argument there. Cooler still are the people who collect and ride them, a fact that hit home again in a big way during the 4th Annual *Motorcycle Classics Ride 'Em, Don't Hide 'Em Getaway* this past August, a two-day romp through Pennsylvania's beautiful Laurel Highlands with 70-some vintage bike fans. Attendees are riding machines typically 40 years old or older, and more often than not they're on bikes they've personally brought back from the dead, or tendered since new. That speaks volumes to owner engagement and enthusiasm, two ingredients in the old bike mix that make this such a rich corner of the world.

There are plenty of newer, more comfortable and, frankly, better performing motorcycles available for pounding down the back roads of Pennsylvania than the 1967 Moto Guzzi V7, 1973 Triumph X75 Hurricane and 1976 Kawasaki KZ750 — to name just a few — that joined our group. But for those bikes' owners, that misses the point: Anybody can ride a new bike, but it takes a special person to brave the blacktop on a 50-year-old BSA or Benelli. And contrary to what people outside the category think, the old bike group isn't just a bunch of motor-crazed nut cases. That's definitely core, but it's so much deeper than that, and if you went to Seven Springs, Pennsylvania, you couldn't miss that fact.

For two-plus days, we explored some of the most beautiful roads you'll find anywhere, reveling in the discovery awaiting us around each turn and over every rise. But more than that we gathered as a community, engaging our shared passion and exchanging valuable knowledge of our bikes learned over years of ownership. You might not own a 1988 Ducati Paso Limited, but it's fascinating learning the more arcane details of the one-year-only model (only 50 made it to the U.S.) from its enthusiastic owner, who upon hearing me say I've always wanted one handed me the keys so I could take his for a spin. Awesome. And just what I didn't need: I've often thought about getting one, now the hook's set.



Guest of honor Dain Gingerelli joins the group photo at the Getaway.

A highlight of the weekend was the opportunity to get to know Dain Gingerelli, this year's special guest. A well-known face in the California race scene of the 1970s and sport editor at *Cycle Guide* from 1979 to 1987, Dain is one of the most under-recognized figures of the last 40 years of motorcycle journalism. I'd met Dain briefly a few times before, most memorably riding behind him down California's Palomar Mountain during Royal Enfield's 2014 intro of the 535cc single-cylinder Continental GT. Dain's imprint at *Cycle Guide* was instrumental in forming my interest in motorcycle journalism, so it was something of a pinch-me moment riding behind Dain, watching him effortlessly swing his bike through the 20-plus hairpin turns heading down from Palomar's 6,140-foot crest to its 2,800-foot base. I'll never forget getting to the bottom and catching up with Dain, who'd pulled over to wait for the rest of the group. Pulling off my helmet, I remarked what a job it was trying to even come close to matching his pace, to which Dain replied — with absolutely no sense of boasting or ego, just raw enthusiasm — "Yeah, that was fun, I was practicing not braking."

When *Cycle Guide* folded its tent in 1987, Dain decided it was time to get out of the corporate world and go freelance. He's continued working in the motorcycle industry ever since, actively engaging the sport he loves, keeping abreast of the people and companies that define the industry, and maintaining the same wide-eyed enthusiasm for the sport that he's had since he bought his first bike, a Honda S90, as a teenager in the Sixties. Fit and agile, Dain's natural competitiveness in the saddle shines through every time he swings a leg over a bike, and getting to ride with him — and everyone else who attended this year's Pennsylvania event — was a lifetime treat, and a powerful reminder of the incredible people who surround us. Ride safe.

Richard Backus/Founding Editor



Cool old bikes as far as the eye can see at the Saturday lunch stop.



## “The bike starts easily (too easily, actually) and will run at lower engine speeds ...”

### Suzuki T20 piston kit

**Q:** I am trying to source a piston kit for a 1966 Suzuki T20 Hustler, No. 1 oversize. I am hoping you can steer me in the right direction.

Henning Tnerkildsen/  
Sydney, Australia

**A:** From what little I can find out, the original pistons are unobtainium, but Suzuki GT380 pistons are available and fit, with one caution. You must use the GT380 piston pins, as they are 2mm shorter than the T20 pins and designed to fit the 380 pistons. Another option is the Suzuki RG250 MkIII pistons. Good luck with your rebuild.

### Jetting issue

**Q:** A year ago I picked up a nice 1975 Suzuki TS185 and have been restoring and riding it, reminding me of my youth. I owned a 1972 and 1974 185 along with many other RM and TS models when they were new models.

My problem is the bike runs very nice, but from maybe 5/8 to full throttle it seems to blubber. My thinking was that it must have the wrong main jet, but I checked and it has the correct No. 125 jet. I did find and repair a couple small exhaust pipe cracks.

I have moved the needle clip up and down but now I am stumped. I have the carb somewhat apart and soaking in cleaner now and a new No. 125 jet has arrived in the mail. Do you have any suggestions? I am having a great time tinkering with the bike, but this is making me pull my hair out. Thanks.

Steve Foley/via email

**A:** Steve, you may have the correct numbered jet installed, but do you know if it is in original condition? Back in the day of expensive, hard-to-find parts and bad information, many a main jet was drilled out thinking that more gas means go faster. Try your replacement jet and see if that makes a difference, if not try a No. 120 or No. 115 and see if that changes things. Don't go too lean too fast, that leads to piston seizure.



Ready to take your classic queries: Tech Editor Keith Fellenstein.

### Stuck wheel

**Q:** I am trying to get my 1981 Suzuki GS450 into shape to transport via trailer from Minnesota to Florida to give to my daughter's boyfriend to restore. The bike needs work. Right now the electrics are not working right, so I can't get it started or even light up the lights.

The biggest issue right now is even though I think I shifted it into neutral (engine not running), I can not get it to roll forward or reverse easily so I can get it up on a trailer. With effort, I can get it to roll backwards very slowly feeling a lot of resistance in the rear tire as it turns.

With a lot of effort we can push it forward, but the rear tire does not turn. It just drags along. Any ideas on what we can do to get the rear wheel turning freely so I can easily get it loaded on a trailer?

Thanks very much for any thoughts.

Rick Ross/via email

**A:** I'd start by really loosening up the rear brake linkage and see if that helps. If that doesn't, you'll probably have to take the rear wheel off to visually inspect the brakes and drum, and maybe the rear wheel bearings.

### Carburetor troubles

**Q:** Before I shove this bike off a tall cliff, I figured I should ping you on your vast experience! I'm working on a 1982 GPz550 which is close to complete, except that I can't seem to be able to sort out a carburetor issue. It has the dreaded TK CV carbs. I have been

through the carbs too many times already and all jets are clear, passages flow carb cleaner and air, float levels checked.

It has pod filters and an aftermarket 4-into-1 exhaust (I wish it had the standard exhaust, but that is the way it came). I have a Dynatek Stage 3 ignition. I have a 1983 GPz550 which runs great, and I set these carbs up using that bike's setup as a starting point. It has new plugs, wires, and I changed the igniter with a spare I have.

The bike starts easily (too easily, actually) and will run at lower engine speeds, but begins to die when you open the throttle, and will spit and buck when you close the throttle. Initially it felt like a lean condition, except that the plugs came out black and sooty — classic rich condition.

I have the slide needles in the leanest position, but nothing seems to make any difference. No amount of changing jets or adjustments appears to make any difference. I did notice that if I manually hold open two of the slides (need the other hand for the throttle!) it seems to clear out and rev more cleanly. It almost seems like the slides aren't opening quickly enough to flow the necessary air.

The diaphragms appear good and the slides do lift with the throttle. I'm wondering if the needle jets need to be a leaner size, or am I missing something else I should be looking into? Any thoughts would be appreciated — that cliff is moving closer and closer! Thanks!

Keith Herchenroder

**A:** I think you're on to something with the slides. Many times those staging kits come with new jets for the diaphragm metering too. Is it possible the wrong jets were installed there, choking down the CV slide response? If you have the carburetors set up to match the other GPz550 in your stable you could compare them. P.S. My experience is only half-vast at best ...

Email questions to keithsgarage@motorcycleclassics.com or write:

Keith's Garage,  
Motorcycle Classics,  
1503 SW 42nd St.,  
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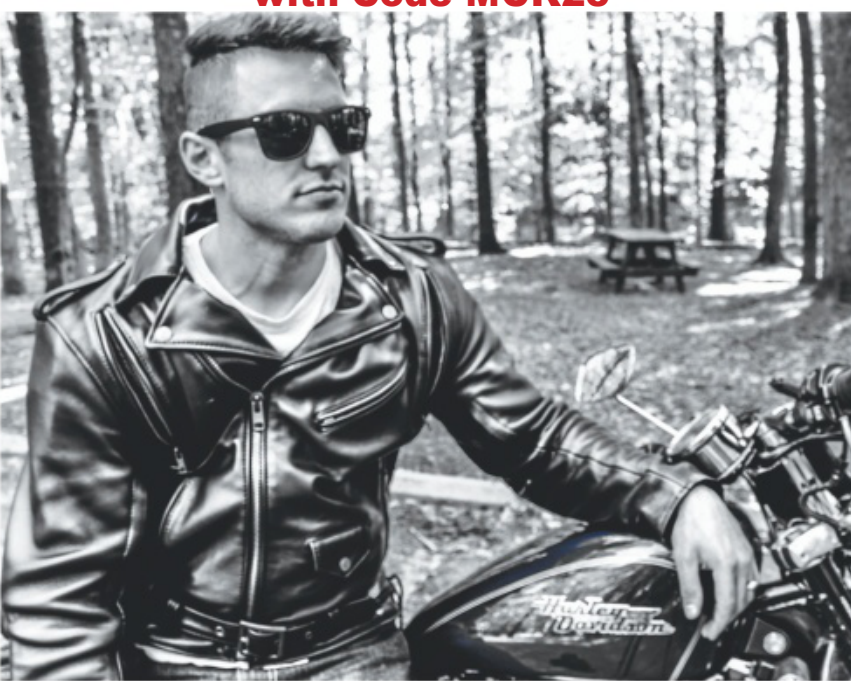
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# Riding the Royal Enfield INT650 and Continental GT, and ordering a Vanson suit

## Riding Royal Enfield's new twins

I've had the chance to ride a handful of Royal Enfield singles over the years, and while I enjoyed them for what they were, I was never really bit by the bug. Though full of character and enjoyable for an afternoon trek, after 100 miles, I never wanted another 100. Though the torque of a big single always makes for a lively riding experience, I never missed our Bullets when they were gone. I already miss both the INT650 and the Continental GT650.

The folks at Royal Enfield arranged for us to borrow a Continental GT650 and an INT650 to take to Pennsylvania for our Ride 'Em, Don't Hide 'Em Getaway this last August (see Page 40), and I had a chance to spend a full day on each bike. The two models are much alike: Seats, handlebars and footpeg location are the main differences between the two models. On both bikes, fit and finish is much better than the singles: Everything just works as it should. Thanks to electric start and fuel injection, they're both easy-to-ride, easy-to-live-with motorcycles. The fuel mapping is clean, without any low-rpm hiccups, and the modest power is smooth and tractable. Both are happy to cruise around town, and while there's not much grunt below 3,000rpm, from about 3,500rpm to 6,000rpm there's a nice, torquey powerband. The sound is punchy yet pleasant. S&S Cycle already offers a set of slip-on mufflers that you'll want as soon as you hear them, and ABS is a nice thing to have, especially in today's traffic.

## The Continental GT650

Six hours, with a couple fuel and map-check stops thrown in, taught me many things about the Conti on Friday, our scouting day. The café style of this thing looks great, and the low bars give the bike excellent feedback once the pace gets cooking. The suspension is compliant and not too rigid. In the corners, the GT650 held its line well on power. I found the brakes to be plenty strong and easy to modulate, but then I'm used to vintage stoppers. This is one of those bikes where the experience is a "slow-bike fast" sort of thing. On the curvy but not-super-technical roads we traveled, you could use all of the throttle in most any gear once you had things pointed in the right direction, without any concerns of loss of traction. But I'm just the wrong size for this



The INT650 in front of a setting sun, complete with Orange Crush paint.

bike. At 6 feet 3 inches tall, this setup is just a bit too cramped for a full day's ride. The first 100 miles of the day were great, but after that I needed to stretch about once an hour. If I were 5 feet 10 inches tall, it would be a different story.

## The INT650

I rode the INT650 on Saturday, the day of our big ride. As soon as I sat on it, I knew the upright bars and lower pegs were going to be a better fit for me. Short of a different steering feel thanks to the higher bars, which we later adjusted to be a bit more pulled back, the INT is just as nice to ride, whether you're cruising or ripping, as its café-dressed brother. The better ergonomics changed my view significantly. Short of high-speed touring, this could really be a do-everything street bike. And with some soft bags and a short windshield, it wouldn't be too bad at that either.

It's hard to go wrong with either bike, especially at the price. If I could have only one bike in the garage, the INT650 would do just fine. But if I already had something for touring and just wanted a bike for canyon carving? That's where the Continental GT shines. — Landon Hall



MC ad man Rod Peterson aboard the Continental GT650.





## ROYAL ENFIELD INT650/ CONTINENTAL GT650

**Engine:** 648cc air/oil-cooled SOHC parallel twin, 78mm x 67.8mm bore and stroke, 9.5:1 compression ratio, 47hp @ 7,250rpm (at crankshaft)

**Top speed:** NA

**Fueling:** Bosch multipoint sequential fuel injection

**Transmission:** 6-speed, chain final drive

**Electrics:** 12v, digital electronic ignition

**Frame/wheelbase:** Dual downtube steel cradle frame/55.1in (1,400mm)

**Suspension:** 41mm Gabriel telescopic fork front, twin Gabriel gas-charged piggyback shocks w/5-stage adjustable preload rear

**Brakes:** Single 12.6in (320mm) disc front, single 9.4in (240mm) disc rear

**Tires:** 100/90 x 18in front, 130/70 x 18in rear

**Weight (dry):** 444.4lb (202kg) INT/435.6lb (198kg) Continental

**Seat height:** 31.7in (804mm) INT/31.1in (790mm)

Continental, 31.2in (793mm) dual-seat Continental

**Fuel capacity:** 3.6gal (13.7ltr) INT/3.3gal (12.5ltr) Continental

**Price:** Starting at \$5,799 (INT650) and \$5,999 (Continental GT)

### Another view of the INT650

The beast is willing. I picked up the Enfield INT650 from Editor Hall's home in Topeka, Kansas, the day after we all returned from this year's Ride 'Em event. For this ride I was following Editor Backus back to Lawrence, about 30 miles if you go the fun way. He was on his Laverda RGS, and the smaller displacement Enfield had no trouble keeping pace with the 1,000cc machine. We weren't on the super slab, so the speed limit was lower, but there were occasional bursts of 70 to 80mph, and he was never able to get ahead by much for very long. I didn't even use the 6th gear overdrive until above 60mph.

Once I had it on the lift in my garage, I began to work to make it fit me better. The shifter lever was too low for my taste, but the turnbuckle adjustment brought the shift lever up where I wanted it. I also rotated the handlebars a few degrees toward the rider, they seemed to be too far a reach for my torso.

Next I had to do something about the long travel of the brake pedal before the rear disc engages. Again the turnbuckle adjustment brought it up to where I wanted it. Finally I increased the rear shock preload by one click to set the sag for my weight. After a few more days of riding, my opinion didn't change much. The seat seems a little soft for long travel, but that might just be me. The rear brake, once pedal height was adjusted, worked well with the front brake to bring the bike to an efficient halt. I even hammered it hard a time or two while traveling in a straight line to bring the ABS into play and it worked as expected.

It was a big hit at our monthly vintage bike meetup. People loved the look of the machine and the price. With four vintage bikes and one modern bike in my garage, I don't have room for it (yet!), but given the chance and space, I wouldn't hesitate to buy one. — Keith Fellenstein

### A second skin to cover your hide: Vanson Leathers

Since 1974 Vanson Leathers has been hand-making top quality leather goods in their shop in Fall River, Massachusetts. In that 45 years, the Vanson logo has become synonymous with American racing, so when I found myself nearing the end of a project that would put me on the race track for the first time, I knew who to call. Ideally, when ordering a custom one-piece leather racing suit, you would visit the Vanson shop to be measured by their tailors. Since a trip to Massachusetts isn't in everyone's schedule, Vanson has refined their mail ordering process to an exact science.

The first step was to print the 21-page ordering guide. This form can seem daunting, but a lot goes into making sure your leathers look and fit perfectly from day one. After receiving the color swatches and order packet Vanson mailed me, I set to work designing my suit. This is important, as there's a high likelihood that this will be the only set of racing leathers I ever buy. Properly cared for they could easily outlive my race bike! Once I had settled on color combinations, lettering, logo and patch placements. I colored in the "blank" suit in the packet.

The next, and most important step is taking measurements for fit. Included in the packet is a tailor's tape and an elastic band known as a VMD (Vanson Measuring Device). I placed the VMD around my waist to be used as a reference point while filling in the four pages of measurements. The ordering guide even has built-in checks and balances ensuring that certain measurements "add up" to a perfect fit, and the measuring guide video on Vanson's YouTube channel offers extra help.

After submitting the form and deposit (half up front, half upon completion), six weeks later a 13-pound box arrived at my desk. It was shocking to open it and see a tangible version of the picture I had drawn two months earlier. I wore my new leathers in my first AHRMA race this summer (see Page 70), and not unlike the cereal commercials from my youth, Vanson leathers became "mom approved." After a small spill in a turn resulted in a slide across the track, I returned to my pit not much worse for the wear. As I surveyed the minor rash on the sleeves and hip of my leathers, my mom said, "You tell the people that made that race suit that your mom said thank you!" — Shane Powers





# RIDES AND DESTINATIONS



## ORGAN PIPE CACTUS NATIONAL MONUMENT, ARIZONA

**O**rgan Pipe Cactus National Monument includes 300,000 acres in southwestern Arizona along the Mexican border. Think stunning desert vistas, a remoteness so intense you can feel it, heat (it was 112 degrees the day we were there), a sense of danger (more on that in a bit) and organ pipe cactus (a plant found here and few other places in the world). There are at least two interwoven histories here, one of the namesake organ pipe cactus and the other of the inhabitants and explorers of this area.

The organ pipe cactus originated in Central America and migrated to its current location more than 3,500 years ago. It evolved to withstand the Sonoran Desert's extremes, including cold winter nights, extreme heat, torrential rains, high winds and long periods without water. The organ pipe cactus grows slowly, with most growth occurring in spurts during summer monsoons. It mostly lives on rocky hillsides facing southwest (the rocks capture heat during the day that keeps the cactus warm at night). Less than a foot tall for the first 10 years, only a few survive; those that do flower nocturnally after 35 years. If they make it that far, an organ pipe cactus might live for 150 years. The plants' flowers provide sustenance to another endangered nocturnal soulmate, the lesser long-nosed bat. The bats then spread the pollen.

The earliest human inhabitants in this area were the Tohono O'odham Native Americans, who called the organ pipe cactus *chuhuis*. The Tohono O'odham Native Americans used organ pipe cactus trunks as building material and the fruit for preserves, syrups and wines, and they based their calendar on the organ pipe cactus harvest schedule. Spanish conquistadors entered the area in the 1600s and gave the plant the name we know based on its similarity to European church organs. El Camino del Diablo (the devil's highway), a 250-mile-long, 1,000-year-old trail now on the National Register of Historic Places, was the primary road through the area. It was used by early inhabitants, explorers, missionaries, miners, and smugglers. The ancient road is also known as El Camino del Muerto (road of the dead), a nod to the area's extreme environment. Arizona's state legislature donated the land that would become the Organ Pipe Cactus National Monument to the federal government during Prohibition (it is said Arizona did so knowing the Feds would improve the roads, making it easier to smuggle liquor from Mexico). UNESCO designated the area a biosphere reserve in 1976 (there are only about 500 such designations worldwide).

Arizona State Route 85 is the only paved road to and through Organ Pipe Cactus National Monument. The Monument's

northern entrance is 22 miles south of Why, Arizona. The name originated from an older Y-configured intersection and an Arizona requirement that towns have at least three letters in their name. SR 85 runs due south to Lukeville, Arizona, on the U.S. side of the Mexican border. There are two unpaved loops on either side of SR 85; the eastern loop is approximately 23 miles long and can be navigated on a street bike, but the western loop is twice as long and much more challenging (a dual-sport or 4WD vehicle is recommended). We took the eastern loop and found spectacular views. Endangerment is a theme central to Organ Pipe Cactus National Monument. There's the fragile organ pipe cactus itself (thought to be vulnerable to global warming), the lesser long-nosed bat (as mentioned before, an endangered species), Sonoran pronghorn antelope (another endangered species; only about 100 are thought to exist), and the area itself. Signs warn visitors of criminal activity (the Visitor Center near the park entrance is named for Ranger Kris Eggle, murdered in August 2002 by a Mexican drug smuggler). Snakes, centipedes, scorpions and mountain lions live here, and of course, there's the heat and remoteness of the place. But its beauty is off the charts, and the ride across the Sonoran Desert floor is amazing. — Joe Berk

## THE SKINNY

**What:** Organ Pipe Cactus National Monument, 10 Organ Pipe Drive, Ajo, Arizona, 85321, (520) 387-6849, ext. 7302

**How to Get There:** From the east or the west, head toward southwestern Arizona on either I-10 or I-8. Take SR 85 south, and you're there.

**Best Kept Secret:** Nearby Ajo, Arizona, is an interesting artists' community. We stayed at Ajo's Guest House Inn, a charming bed and breakfast.

**Avoid:** The summer months (the heat is extreme), talking to strangers in the more remote areas of Organ Pipe Cactus National Monument (Mom was right), and entering the area without water.

**More Photos:** [bit.ly/opcnm](http://bit.ly/opcnm)

**More Info:** [nps.gov/orpi/index.htm](http://nps.gov/orpi/index.htm)



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# CALENDAR NOVEMBER/DECEMBER

## Don't miss these upcoming events!

**11/2** Head to Vicksburg, Mississippi, for the 3rd Annual Vicksburg Vintage Motorcycle Show. Entry is free and open to pre-1990 motorcycles, scooters, dirt bikes, etc. The show runs from 9 a.m. to 3 p.m., and more than 15 awards will be given out, including class awards, People's Choice and Best of Show. Enjoy live entertainment and downtown Vicksburg. The show will be held at the Farmer's Market park at 1055 Washington St. For more info, contact Roger Harris at [roger.harris@ergon.com](mailto:roger.harris@ergon.com) or (601) 831-2079 or search Vicksburg Vintage Motorcycle Show on Facebook.

**11/3** Join the Southern California Norton Owners Club for "the best ride by a dam site," the Hansen Dam Ride. Now in its 40th year, the ride is a great way to spend a day enjoying classic motorcycles. Recent years have seen more than 500 bikes of all makes show up, making it the largest classic motorcycle event of the year in Southern California. A 75-mile-plus route is mapped out for the day. Show up as early as 8 a.m. for coffee and donuts, and after the ride the grill will be fired up with lunch served. The ride departs at 10 a.m. sharp! On the web at [socalnorton.com](http://socalnorton.com)

**11/9** Visit Norcross, Georgia, for the 29th Annual Blue Moon Cycle Euro Bike Swap Meet on Saturday, Nov. 9. The swap meet is open to all parts, accessories and apparel for European motorcycles. Display your late model, used or classic bike for sale in the Consignment Corral for \$25 each. No fee for buyers or sellers, and free lunch for all. The swap meet runs from 9 a.m. to 4 p.m. on Saturday, then come back and join in Sunday, Nov. 10, for the Blue Moon Cycle Vintage Ride. Join the Blue Moon staff and friends for a scenic ride through the Georgia countryside including a lunch stop and a special attraction. This ride is open to all motorcycles 1985 and older. Admission is free, and the ride leaves at 9 a.m. from Blue Moon Cycle. On the web at [bluemooncycle.com](http://bluemooncycle.com), or call John Landstrom for more details at (770) 447-6945, ext. 20.

**12/31** The last ride of the year: Join the Southern California Norton Owners Club for the Run for the Roses up to Newcomb's Ranch. Ride departs at 10 a.m. sharp from Lucky Baldwin's Trappiste located at 1770 East Colorado Blvd. in Pasadena, California. On the web at [socalnorton.com](http://socalnorton.com)

**1/25** Mark your calendar early for the largest vintage motorcycle show in South Florida. Head to Dania Beach, just south of Ft. Lauderdale, for the 14th Annual Dania Beach Vintage Motorcycle Show, from 10 a.m. to 5 p.m. on Saturday, Jan. 25. More than 400 classic bikes will be judged under the trees in Frost Park. Enjoy live music, vendors, a bike parts swap meet, food, motorcycle field games, roller derby girls, a vintage bicycle display and more. The event is free to the public, with a fee for entering bikes, and proceeds benefit K9s For Warriors, Southeastern Guide Dogs and the Dania Beach Lions Club. On the web at [daniabeachvintagebikeshow.com](http://daniabeachvintagebikeshow.com)



Join in the fun at the 14th Annual Dania Beach Vintage Motorcycle Show, Jan. 25, 2020.

**Oct. 31-Nov. 3** — Lone Star Rally. Galveston Island, TX. [lonestarrally.com](http://lonestarrally.com)

**Nov. 7-10** — 19th Annual Rocky Point Rally. Puerto Peñasco, Sonora, Mexico. [rockypointrally.com](http://rockypointrally.com)

**Nov. 22-24** — International Motorcycle Show. Long Beach, CA. [motorcycleshows.com](http://motorcycleshows.com)

**Nov. 24** — So-Cal Cycle Swap Meet. Long Beach, CA. [socalcycleswapmeet.com](http://socalcycleswapmeet.com)

**Dec. 1** — 42nd Annual Chicagoland Toys for Tots Motorcycle Parade. Chicago, IL. [chicagolandtft.org](http://chicagolandtft.org)

**Dec. 6-8** — International Motorcycle Show. New York City, NY. [motorcycleshows.com](http://motorcycleshows.com)

**Dec. 29** — So-Cal Cycle Swap Meet. Long Beach, CA. [socalcycleswapmeet.com](http://socalcycleswapmeet.com)

**Jan. 3-5** — International Motorcycle Show. Dallas, TX. [motorcycleshows.com](http://motorcycleshows.com)

**Jan. 10-12** — International Motorcycle Show. Washington, DC. [motorcycleshows.com](http://motorcycleshows.com)

**Jan. 17-19** — International Motorcycle Show. Denver, CO. [motorcycleshows.com](http://motorcycleshows.com)

**Jan. 24-26** — International Motorcycle Show. Cleveland, OH. [motorcycleshows.com](http://motorcycleshows.com)

**Jan. 26** — So-Cal Cycle Swap Meet. Long Beach, CA. [socalcycleswapmeet.com](http://socalcycleswapmeet.com)

**Jan. 31-Feb. 2** — International Motorcycle Show. Minneapolis, MN. [motorcycleshows.com](http://motorcycleshows.com)

**Feb. 7-9** — International Motorcycle Show. Chicago, IL. [motorcycleshows.com](http://motorcycleshows.com)

**Feb. 23** — So-Cal Cycle Swap Meet. Long Beach, CA. [socalcycleswapmeet.com](http://socalcycleswapmeet.com)

*Motorcycle Classics wants to know about classic motorcycle shows, swap meets, road runs and more.  
Send details of upcoming events at least three months in advance to [lhall@motorcycleclassics.com](mailto:lhall@motorcycleclassics.com)*



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(Required by 39 U.S.C. 3685; Published in Nov/Dec 2019 **Motorcycle Classics**)

1. Title of Publication: *Motorcycle Classics*.  
2. Publication No. 024-116. 3. Date of Filing: September 30, 2019. 4. Frequency of Issue: Bi-monthly. 5. No. of Issues Published Annually: 6. 6. Annual Subscription Price: \$29.95. 7. Complete Mailing Address of Known Office of Publication: 1503 SW 42nd St., Topeka, Shawnee, KS 66609-1265. 8. Complete Mailing Address of Headquarters or General Business Office of Publisher: 1503 SW 42nd St., Topeka, Shawnee, KS 66609-1265. 9. Full Names and Complete Mailing Address of Publisher, Editor and Managing Editor: Publisher – Bill Uhler; Ogden Publications, Inc., 1503 SW 42nd St., Topeka, KS 66609-1265; Editor – Landon Hall; Ogden Publications, Inc., 1503 SW 42nd St., Topeka, KS 66609-1265; Managing Editor – N/A. 10. Owner: Ogden Publications, Inc., 1503 SW 42nd St., Topeka, KS 66609-1265. 11. N/A. 12. N/A. 13. Publication Name: *Motorcycle Classics*. 14. Issue Data for Circulation Data Below: Nov/Dec 2018-Sept/Oct 2019.

### 15. Average No. of Copies of Each Issue During Preceding 12 Months

A. Total No. of Copies (Net press run): 47,039; B. Paid and/or Requested Circulation; 1. Paid/Requested Outside-County Mail Subscriptions: 18,070; 2. Paid In-County Subscriptions: 0; 3. Sales Through Dealers, Carriers, Street Vendors and Counter Sales: 6,808; 4. Other Classes Mailed Through USPS: 0; C. Total Paid and/or Requested Circulation: 24,878; D. Free Distribution by Mail (Samples, complimentary and other free): 1. Outside-County: 519; 2. In-County: 0; 3. Other Classes Mailed Through the USPS: 0; E. Free Distribution Outside the Mail: 0; F. Total Free Distribution: 519; G. Total Distribution: 25,397; H. Copies not Distributed: 21,642; I. Total: 47,039; J. Percent Paid and/or Requested Circulation: 97.96%.

### Actual No. of Copies of Single Issue Published Nearest to Filing Date

A. Total No. of Copies (Net press run): 42,697; B. Paid and/or Requested Circulation; 1. Paid/Requested Outside-County Mail Subscriptions: 17,754; 2. Paid In-County Subscriptions: 0; 3. Sales Through Dealers, Carriers, Street Vendors and Counter Sales: 6,557; 4. Other Classes Mailed Through USPS: 0; C. Total Paid and/or Requested Circulation: 24,311; D. Free Distribution by Mail (Samples, complimentary and other free): 1. Outside-County: 495; 2. In-County: 0; 3. Other Classes Mailed Through the USPS: 0; E. Free Distribution Outside the Mail: 0; F. Total Free Distribution: 495; G. Total Distribution: 24,806; H. Copies not Distributed: 17,891; I. Total: 42,697; J. Percent Paid and/or Requested Circulation: 98.00%.

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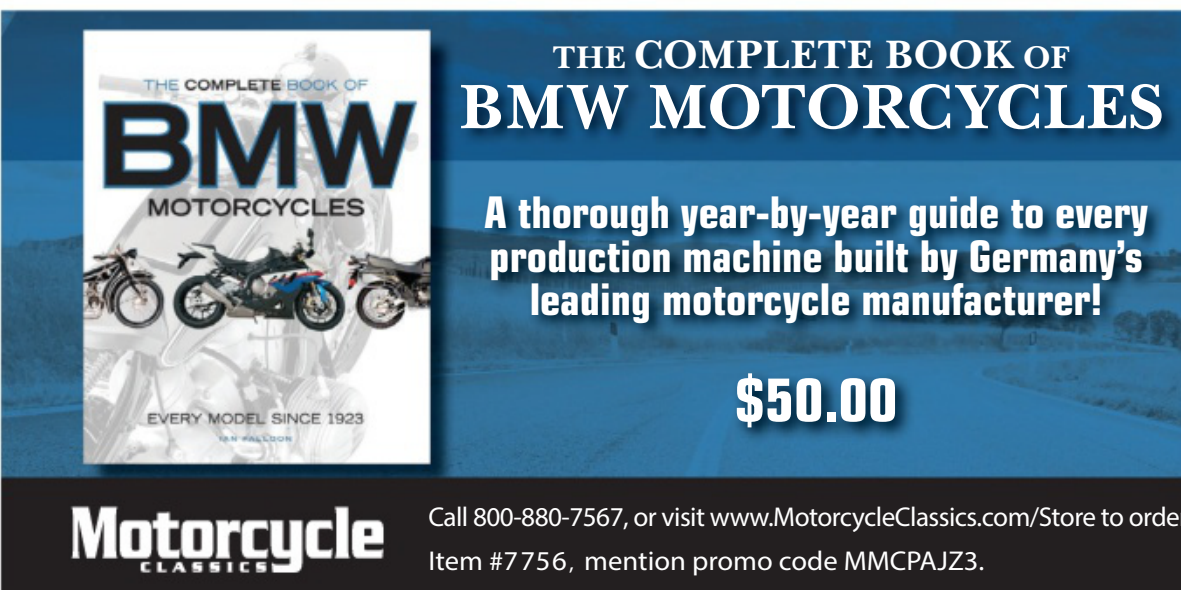
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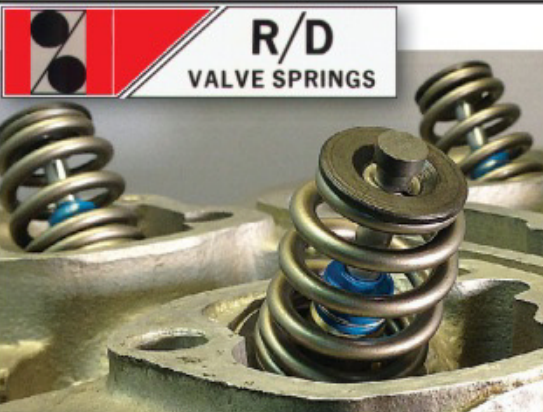
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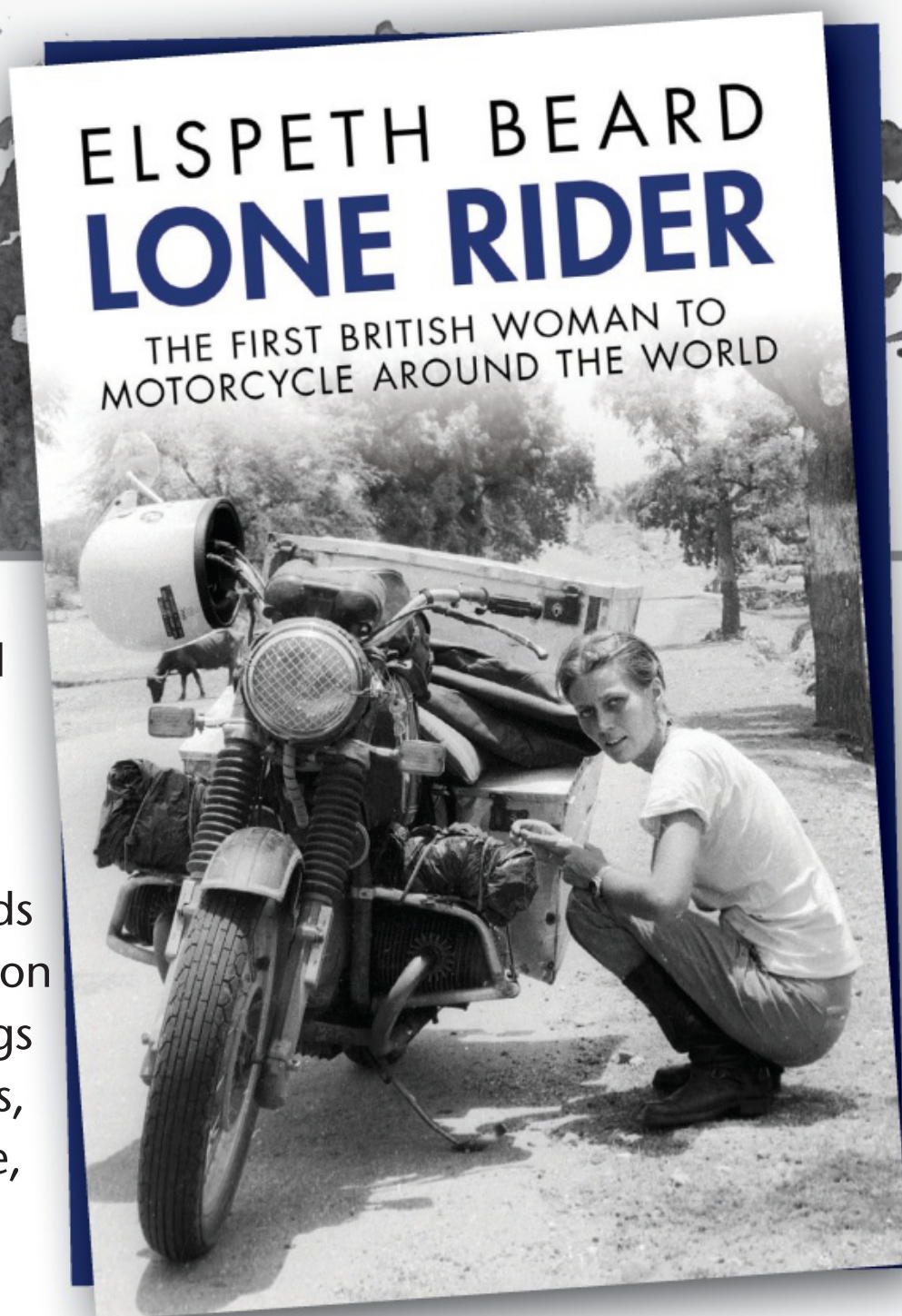
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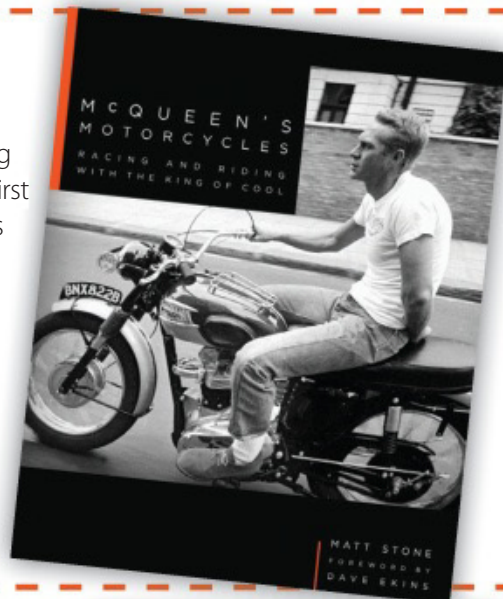
*Indian Motorcycle: America's First Motorcycle Company* tells the complete story of America's first mass-produced motorcycle maker, from its start as a bicycle manufacturer to the purchase of the brand by Polaris Industries in 2011 and the subsequent new Indian motorcycles. This book details the early years of the 20th century when Indian dominated the world's racetracks, when the company fell on hard times and filed for bankruptcy, and finally when Polaris restored the Indian to its rightful place. #8002 ~~\$50.00~~ \$46.95

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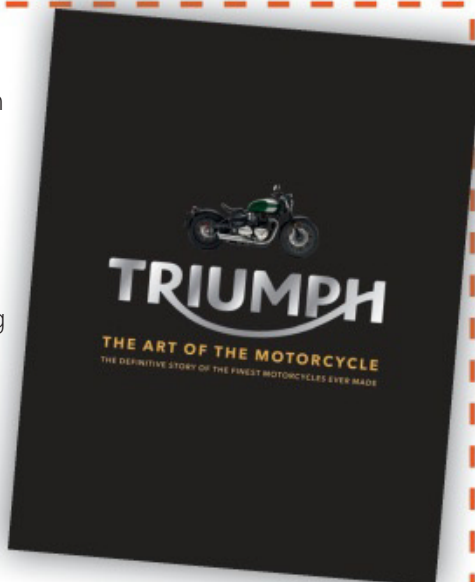
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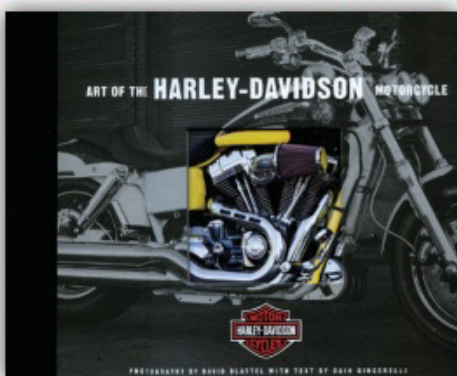
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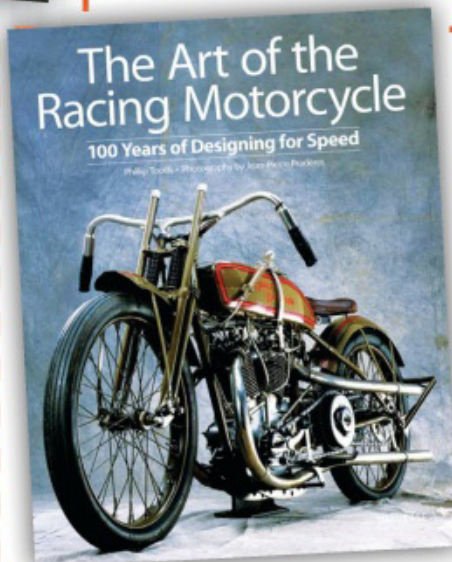
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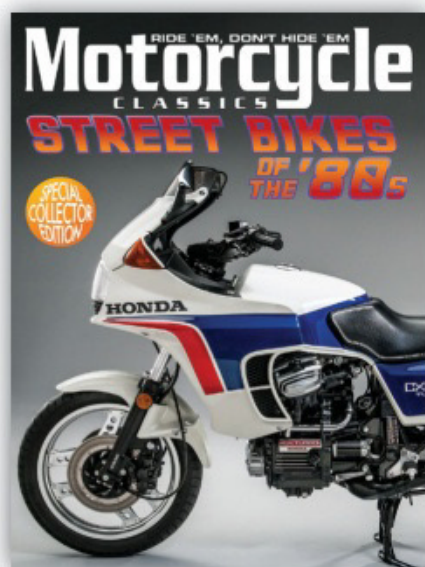
### THE ART OF THE RACING MOTORCYCLE

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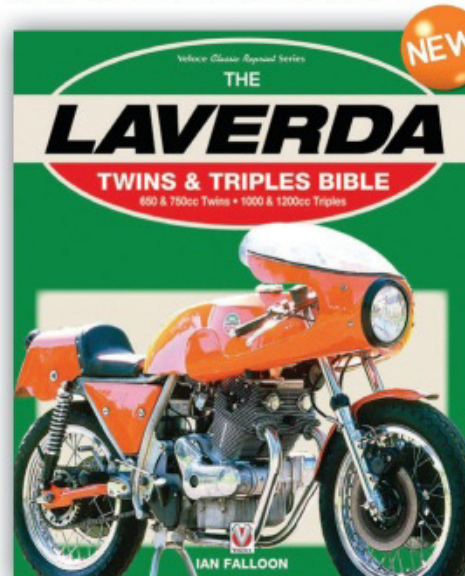
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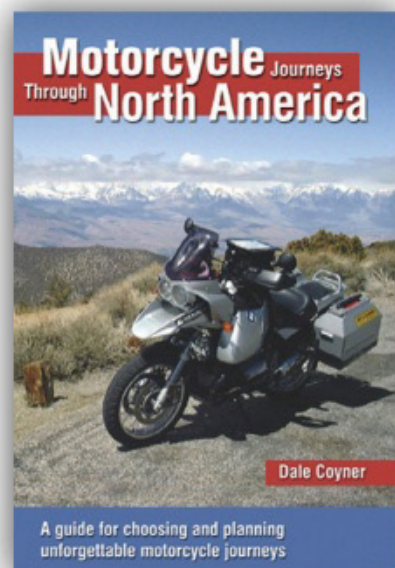


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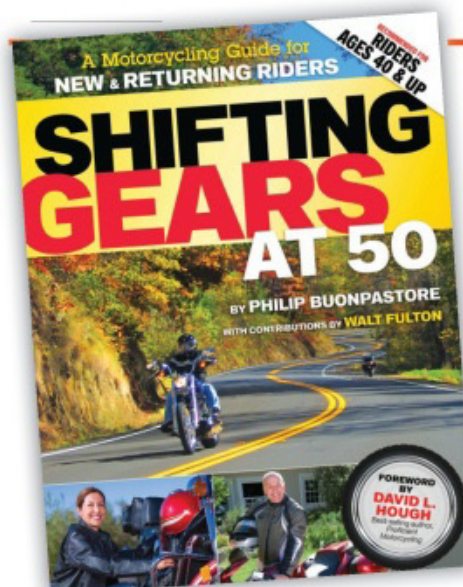
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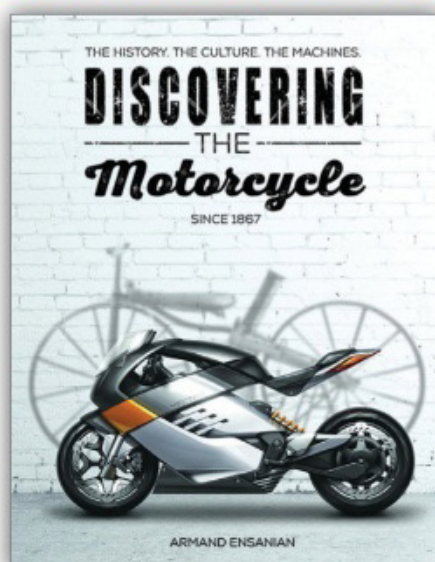
In *Shifting Gears at 50*, author Philip Buonpastore emphasizes what older riders should be aware of and which factors can affect their rides. Split into two parts, the book first covers safety advice to consider and precautions to take while on your ride, followed by unique photographs and insights from five of the author's favorite long-distance tours around the country.

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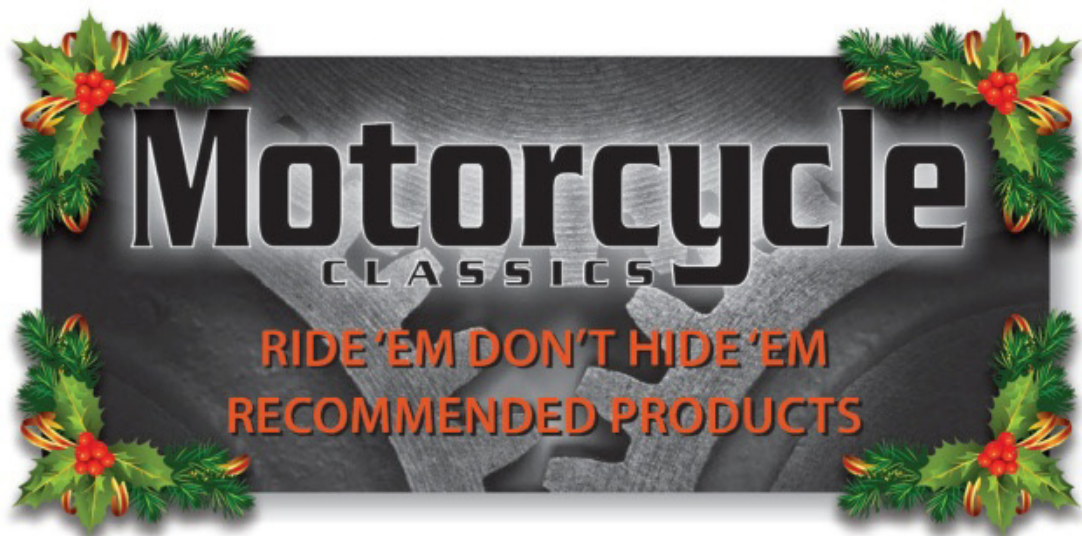
*Discovering the Motorcycle* is a full-throttle, never-before completed history and cultural evaluation of motorcycling from 1867 to the present. This book introduces readers to the vast world of motorcycling, including its history, social impact, and how these machines are built and function. Chapters cover the history of motorcycle racing, bike events, museums, and clubs.

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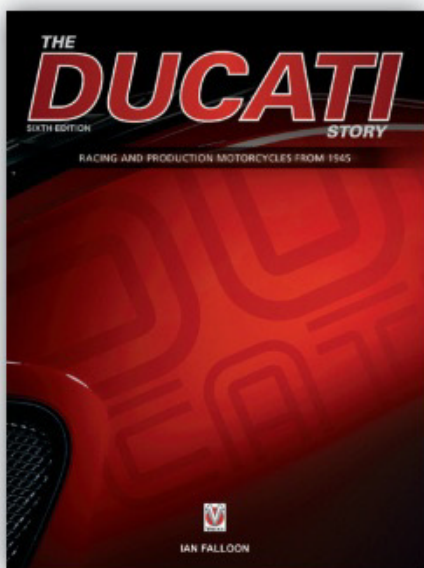


## MOTORCYCLE CLASSICS NAVY VINTAGE SHORT-SLEEVE T-SHIRT

This *Motorcycle Classics* T-shirt will quickly become an old favorite! Made of super-soft material, this shirt is perfect for wearing on your rides or when you're working on your bike. Emblazoned with an outline of the 1960 Triumph 5TA Speed Twin and our slogan, "Ride 'Em, Don't Hide 'Em," this shirt announces to everyone your love of motorcycles and *Motorcycle Classics*! The navy blue short-sleeve T-shirt is made of slightly heathered, medium-weight cotton-poly jersey fabric for a durable yet unbeatable feel.



#9424-9427	S-XL	<del>\$15.00</del>	\$13.99
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### THE DUCATI STORY, 6TH EDITION

*The Ducati Story* is brought right up to date in this new edition of Ian Falloon's authoritative book, covering the complete history of the marque. Initially under government control, Ducati went through several decades of ups and downs, characterized by dubious managerial decisions. Held together by the great engineer Fabio Taglioni, the father of desmodromic valve gear, Ducati produced some of the finest motorcycles of the 1950s, 1960s, and 1970s. Read all about these amazing bikes from beginning to end plus, this new edition includes a brand new chapter featuring all the models from 2012 up to 2018.

#9415 ~~\$65.00~~ \$59.95



### MOTORCYCLE CLASSICS TALES FROM THE ROAD

This 96-page guide is the next best thing to actually hopping on your bike and taking a long road trip with no particular destination in mind. Filled with stories of people who have ridden through places from the Big Sur coast in California to Australia, the issue will motivate you to get on your bike and take a ride. Packed with pictures of the riders' travels and routes, this issue will help you see the beauty of different places from the view of a bike.

#9106 ~~\$6.99~~ \$5.99

### MOTORCYCLE CLASSICS STAINLESS STEEL WATER BOTTLE

Whether you're heading to work or getting ready for a long ride, this *Motorcycle Classics* Stainless Steel Water Bottle will keep your drinks cold for the whole trip! This 17-ounce bottle is double-walled, 18/8 stainless steel with vacuum insulation, and it will keep drinks hot for 12 hours and cold for 48.

#9116 ~~\$19.99~~ \$16.99

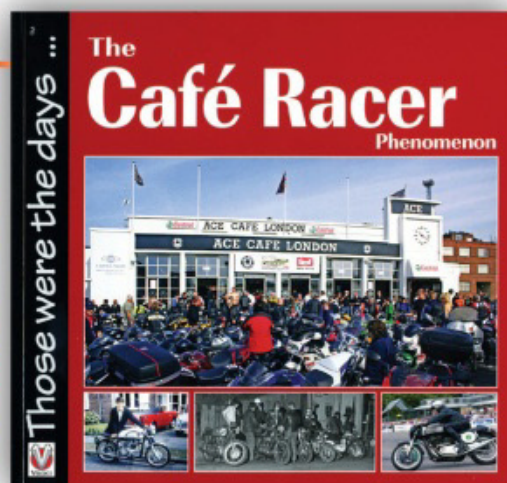
**Great Price!**



### THE MOTO GUZZI STORY, 3RD EDITION

The story of Moto Guzzi is a story of grit and survival. As one of Italy's oldest and most legendary marques, Moto Guzzi saw heightened success during the 1930s and the 1950s, when they dominated 250cc and 350cc Grand Prix racing. Their withdrawal from racing coincided with a period of stagnation until the company was sold to De Tomaso in 1973. During the 1970s, the V7 Sport and Le Mans were at the forefront of the new superbike era, and later embraced contemporary technology with the 1000cc Daytona. With the exclusive stories found in this book, you get an inside look at the complete history of Moto Guzzi.

#9413 ~~\$60.00~~ \$54.95

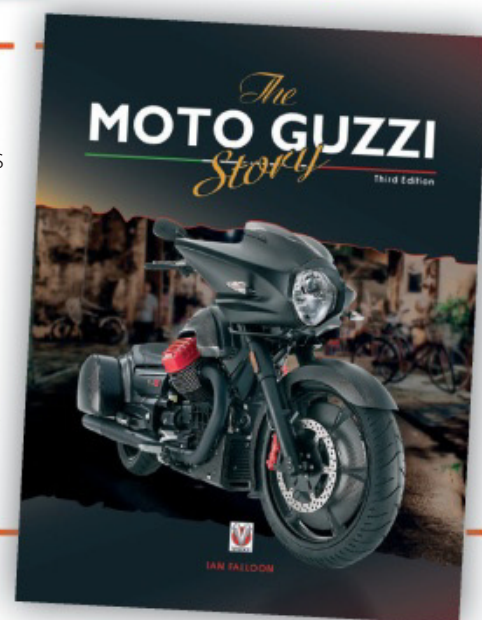


### THE CAFÉ RACER PHENOMENON

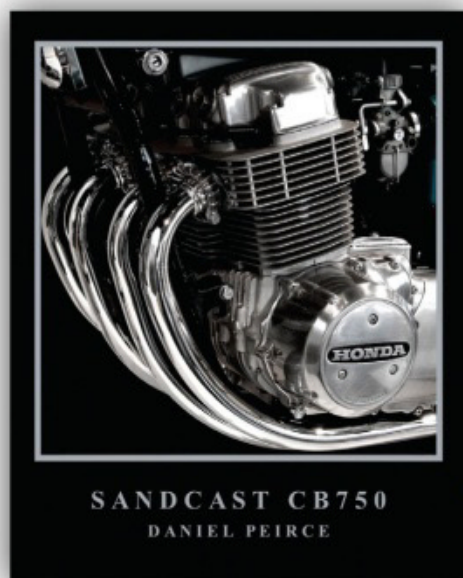
Through photos, records, and memories of people who were there, *The Café Racer Phenomenon* captures the rebellious spirit of England in the 1950s that was epitomized through the Café Racer bikes. From its roots in the '59 club to the revival of the Ace Café London, this book will give you a greater appreciation for these unique bikes. *While Supplies Last!*

**Great Price!**

#4328 ~~\$29.95~~ \$22.95

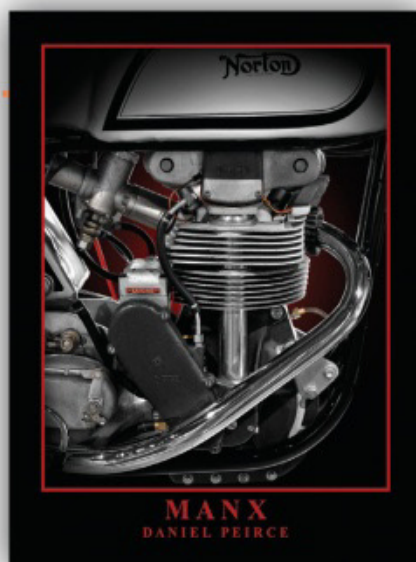






#### SANDCAST CB750 PRINT

This Endura Metallic print is photographically printed by professional motorsports photographer Daniel Peirce and displays the Sandcast CB750 Engine. The subtle metallic surface produces a depth and color richness unmatched by any other process. This 16" x 20" is printed on demand and signed and numbered by the artist. *Please allow two weeks for delivery.* #3803 ~~\$69.00~~ \$62.10



#### MANX MOTORCYCLE PRINT

This Manx Motorcycle Print is perfect for any motorcycle enthusiast! This Endura Metallic print is photographically printed by professional motorsports photographer Daniel Peirce. The subtle metallic surface produces a depth and color richness unmatched by any other process. This 16" x 20" is printed on demand and signed and numbered by the artist. *Please allow two weeks for delivery.* #3550 ~~\$69.00~~ \$62.10



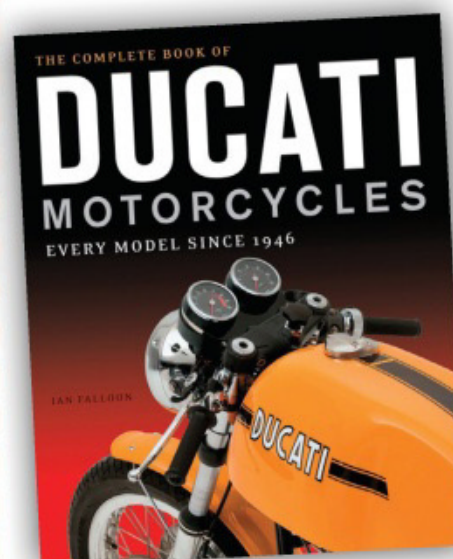
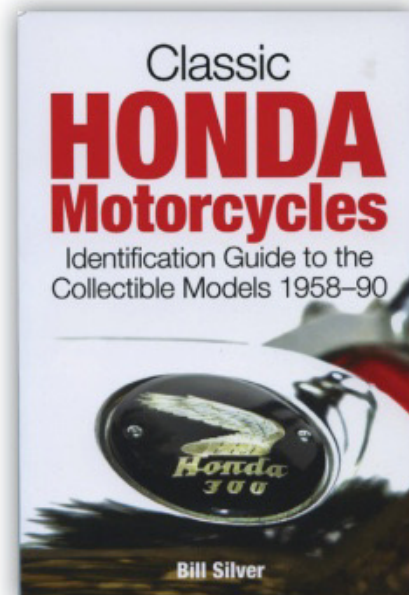
#### BLACK SHADOW PRINT

This Black Shadow Print metallically displays the Black Shadow Engine on a 16" x 20" print. The subtle metallic surface produces a depth and color richness unmatched by any other process. Created by professional motorsports photographer Daniel Peirce, each print is signed and numbered by the artist. *Please allow two weeks for delivery.* #3795 ~~\$69.00~~ \$62.10

#### CLASSIC HONDA MOTORCYCLES

Honda made its mark on the motorcycle world with small, affordable bikes, and grew well beyond that to create some of the most important performance machines ever built. Today, these bikes are increasingly coveted by collectors and enthusiasts. This guide to the collectible Hondas gives prospective buyers a leg up on the current market for groundbreaking classics.

#6428 ~~\$40.00~~ \$34.00



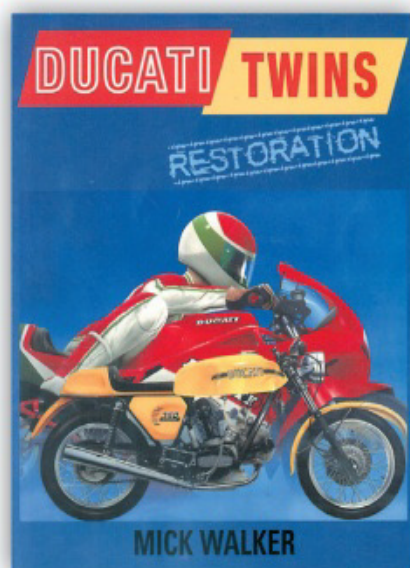
#### THE COMPLETE BOOK OF DUCATI MOTORCYCLES:

#### EVERY MODEL SINCE 1946

*The Complete Book of Ducati Motorcycles* traces the stunning chronology of the motorcycles dreamed up by Ducati, from the 1940s to the present day. Laid out for the first time in the form of an encyclopedia, with gorgeous photography and insights from Ducati expert Ian Falloon, this book offers motorcycle

enthusiasts a closer look at the craftsmanship, power, and beauty of these extraordinary motorcycles. The book features all of the motorcycles from Ducati's storied history, including the groundbreaking Desmodromic 750 Super Sport, the Mike Hailwood Replica, the Superbike-dominating 916, and the epic Panigale.

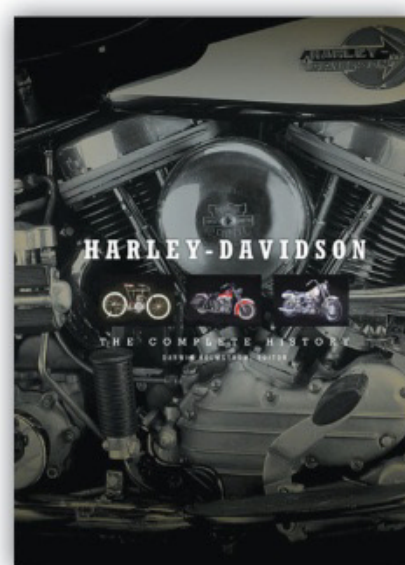
#8055 ~~\$50.00~~ \$42.50



#### DUCATI TWINS RESTORATION

To most enthusiasts, twin cylinder Ducatis means those of the vee configuration. However, the first of these, the 750GT, did not appear until the early 1970s. These early twins, plus the fours, were either racing machines or prototypes that never made it to production, but they are none-the-less an important link to any history of Ducati Meccanica. *While supplies last!*

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#### HARLEY-DAVIDSON:

#### THE COMPLETE HISTORY

Cruise through this collection of Harley-Davidson's most iconic motorcycles! The most beloved and recognizable motorcycles are included here: the Knucklehead, the Panhead, the Peashooter, the KR, the Sportster, the XR750, the Shovelhead, the Evolution, the Twin Cam, the V-Rod, and all the rest. Pages in the book reveal historic images as well as modern photos from the top motorcycle photographers working today.

#8056 ~~\$50.00~~ \$39.95

**Great Price!**

#### BRITISH CUSTOM MOTORCYCLES

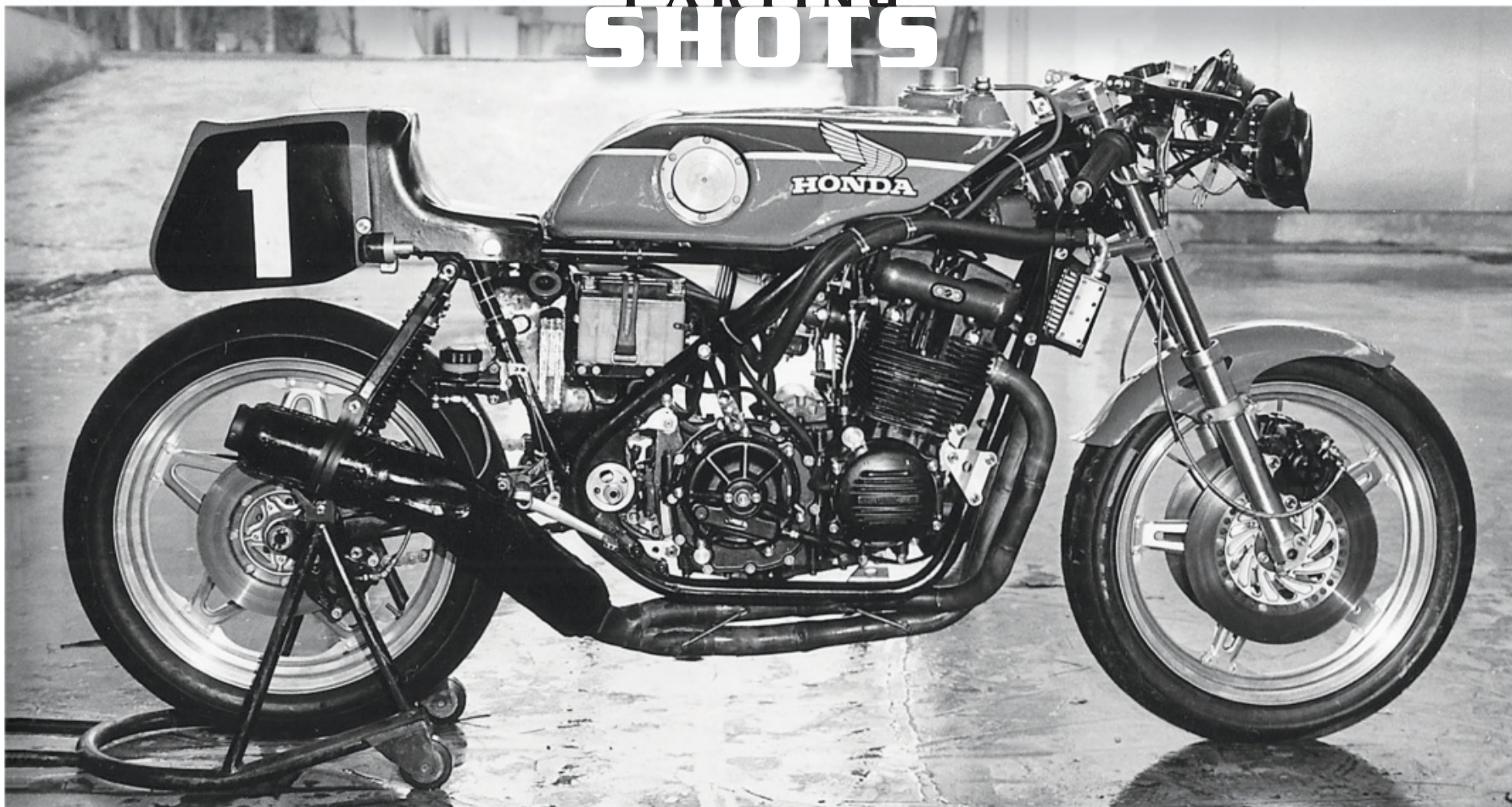
This book takes a look at some of the fantastic British motorcycle-based custom bikes around the globe. A celebration of all things "custom Brit," it is the only book devoted entirely to the British custom motorcycle, revealing the innovative, fresh approach to British-based custom bike building. *While supplies last!*

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## Using round-the-clock endurance racing to go full circle

Only a few years after the CB750 Four's landmark 1969 debut, Honda Motor Co.'s movers and shakers determined that it was time for a replacement. The bike that had once rocked the motorcycle establishment with its single-overhead cam, 4-cylinder inline engine was growing long in the tooth. What to do, and in typical Honda fashion they did what they did best — they went racing, this time as much to develop a replacement product as to win championships.

And for 1976, Honda rolled its all-new prototype open-class road racer onto the Zandvoort starting grid in the Netherlands for a non-championship 600-kilometer endurance race. The bike — actually Honda entered two race bikes at Zandvoort, one each by European distributors Honda France and Honda U.K. — was powered by an engine that eventually would form the basis for the new 1979 CB750K, CB750F and CB900F models. The French team won the Zandvoort race, and later followed that by winning at Mugello, Italy, the opening round for the 1976 Coupe d'Endurance, Europe's endurance championship series at the time. Long story short, the Hondas won every race on the Coupe d'Endurance calendar that year, including the coveted 24-hour Bol d'Or to easily wrap up the title.

Slippery aerodynamic wind fairings dressed with number plates and Dzus fasteners for quick removal served as perfect aprons to shield from prying eyes the all-new engines that powered those racing laboratories.

Like the engine it was to replace, the new RCB 1000 motor was an air-cooled inline four. The comparison ended there. The new engine,

its cases, cylinders and heads painted black to better dissipate heat, spun two — not one — overhead camshafts that monitored the up-and-down movement of four — not two — valves per cylinder. The cylinders were canted forward a few additional degrees, possibly to help centralize mass for snappier, more precise steering input, and the four exhaust headers were routed into a single silencer (racers never use the term muffler!), creating a 4-into-1 system, a design that was becoming ever more popular at the time.

Shortly after debuting the RCB 1000, Honda equipped all team bikes with its patented Comstar wheels that used pressed stainless steel spokes riveted to spun aluminum rims. Those wheels soon found their way onto production-series CB750s, first the SOHC 1977 CB750 Super Sport and later the 1979 F-model twin-cammers.

Various other technology was gleaned from the RCB racers, and by 1980 and one year after the new CB variants had been put to market, Honda conformed its racers to the revamped FIM world championship endurance rules requiring all entries be production-series models. Enter the CB900F-based racer, still known as the RCB 1000.

Having dominated the endurance racing scene from 1976-1979 with prototype bikes, Honda continued winning with its new production-based racer as well, scooping the 1980 championship to confirm yet again that racing can improve the breed. Using racing to accomplish necessary R&D, Honda Motor Co. had again gone full circle, this time with its inline 750 concept.

— Dain Gingerelli



By 1980, Honda was dominating endurance racing in Europe. Here, two RCB 1000s lead tandem during the race at Assen.



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